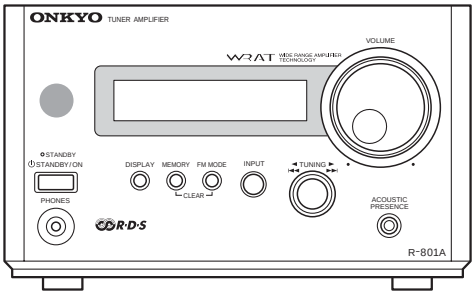
Ref. No. 3719
102001

ONKYO® SERVICE MANUAL

FM STEREO/AM TUNER AMPLIFIER

MODEL R-801A



European models front panel shown.

MPP	230-240V AC, 50Hz
MDT	120V AC, 50/60Hz
MGT,MGR	220-230V,50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®
IMAGINATIVE SIGHT & SOUND

SPECIFICATIONS

Amplifier Section

Power output
- 17 watts per channel, min RMS, at 4 ohms, both channels driven 1 kHz, with no more than 0.8% THD
- 13 watt per channel, min RMS, at 8 ohms, both channels driven 1 kHz, with no mor e than 0.8% THD
- 2 X 17 watts at 4 ohms, 1 kHz, DIN
- 2 X 15 watts at 6 ohms, 1 kHz, DIN
- 2 X 13 watts at 8 ohms, 1 kHz, DIN
- 2 X 24 watts at 4 ohms, 1 kHz, EIAJ

Dynamic power output
- 2 X 21 watts at 4 ohms
- 2 X 14 watts at 8 ohms

Total harmonic distortion
- 0.8% at rated power

IM distortion
- 0.8% at rated power

Damping factor
- 20 at 8 ohms

Input Sensitivity and Impedance
- TAPE, MD, CD/DVD, CDR/PC:
  - 150 mV, 50 kohms

Frequency and response
- 10 to 100 kHz ±3 dB

Tone control
- ACOUSTIC PRESENCE 1
  - +4.5 dB at 41 Hz
- ACOUSTIC PRESENCE 2
  - +5.5 dB at 82 Hz
- ACOUSTIC PRESENCE 3
  - +6 dB at 41 Hz, + 6 dB at 82 Hz
- ACOUSTIC PRESENCE 4
  - +6 dB at 41 Hz, + 6 dB at 82 Hz, +5 dB at 10 Hz

Signal to noise ratio
- TAPE: 100 dB (IHF-A)

Muting
- – 50 dB

Tuner Section

Tuning range
- FM: 87.9 to 107.9 MHz (200 kHz steps) (U.S. & Canadian models)
  87.5 to 108.00 MHz (50 kHz steps) (Other area models)
- AM: 530 to 1710 kHz (10 kHz steps) (U.S. & Canadian models)
  522 to 1611 kHz (9 kHz steps) (Other area models)

Usable sensitivity
- FM: Mono 11.2 dBf, 1.0 µV (75 ohms IHF), 0.9 µV (75 ohms DIN)
  Stereo 17.2 dBf, 2.0 µV (75 ohms IHF), 23.0 µV (75 ohms DIN)
- AM: 30 µV

50 dB Quieting sensitivity
- FM: Mono 17.2 dBf, 2.0 µV (75 ohms)
  Stereo 37.2 dBf, 20.0 µV (75 ohms)

Capture ratio
- FM: 2.0 dB

Image r ejection ratio
- FM: 40 dB (U.S. & Canadian models)
  85 dB (Other area models)
- AM: 40 dB

IF rejection ratio
- FM: 90 dB
- AM: 40 dB

Signal to noise ratio
- FM: Mono 73 dB, IHF
  Stereo 67 dB, IHF
- AM: 40 dB

Selectivity
- FM: 50 dB DIN (±300 kHz at 40 kHz Devi.)

AM Suppr ession Ratio
- 50 dB

Harmonic distortion
- FM: Mono 0.2%
  Stereo 0.3%
- AM: 0.7 %

Frequency response
- FM: 30 to 15,000 Hz (±1.5 dB)

Stereo separation
- FM: 45 dB at 1,000 Hz
  30 dB at 100 to 10,000 Hz

Stereo threshold
- FM: 17.2 dBf, 2.0 µV (75 ohms)

General

Clock pr ecision
- monthly error: +/-30 seconds (at 25 degrees Celsius)

Power supply
- AC 120 V, 60 Hz
- AC 230-240 V, 50 Hz
- AC 220-230 V, 50 Hz/60 Hz

Power consumption
- 44 W

Dimensions (W X H X D)
- 155 X 94 X 285 mm
- 6-1/8" X 3-1/16" X 11-1/4"

Weight
- 2.9 kg, 6.4 lbs

Specifications and external appearance are subject to change without notice as a result of product improvement.

SERVICE PROCEDURES

1. Replacing the fuses

This symbol located near the fuses indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

Ce symbole indique que le fusible utlise est a rapide. Pour une protection permanente, n'untiliser que fusibles de meme type. Ce darnier est la qu le present symbol est appse.

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252082 or	0.315A-EAWK,Fuse <PP,GT,GR>
	252232 or	315MA-SE-TL250V,Fuse
	252266	315MA-SE-TL350V,Fuse
	252156 or	1A-UL/T-237,Fuse<DT>
	252250	1A-T/UL-ST2,Fuse

Note: <PP>: 230-240V model only
<DT>: 220V model only
<GT>: 120V model only
<GR>: 220-230V model only

2. To initialize the unit

This device employs a microprocessor to perform various functions and operations. If interference generated by an external power supply, radio wave, or other electrical source results in accident which causes the specified operations and functions to operate abnormally.
To perform a result, please follow the procedure below.

1. Press and hold down the MEMORY button, then press the DISPLAY button.
2. Press the STANDBY/ON button.

After "clear" is displayed, the preset memory and each mode stored in the memory, such as surround, are initialized and will return to the factory setting.

3. Safety-check out

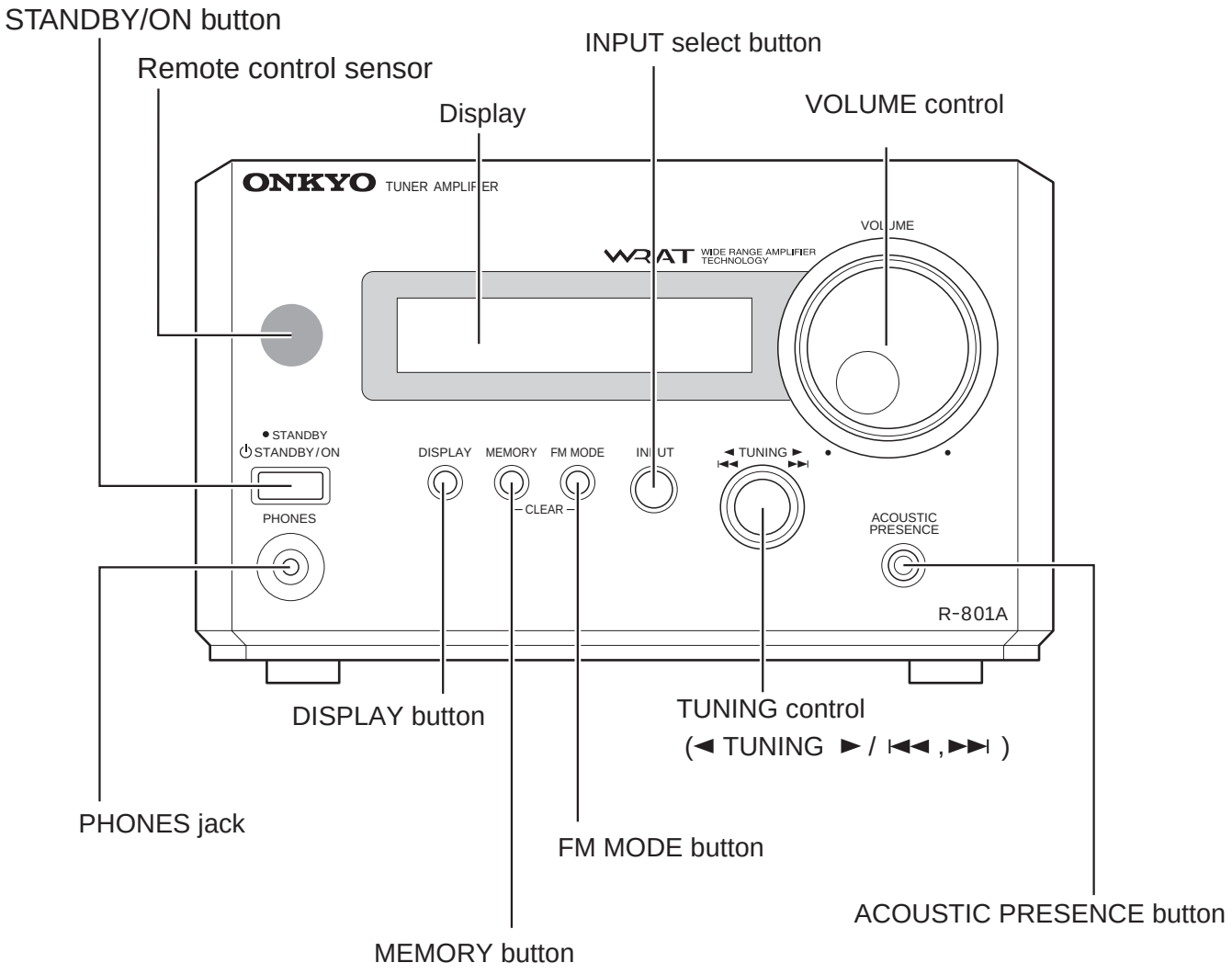
(120V model only)
After correcting the original service problem, perform the following safety check before releasing the set to the customer.
Connect the insulating-resistance tester between the plug of power supply cord and screw on the back panel.
Specifications: 3.3Mohm+/-10% at 500V.

4. Memory Preservation

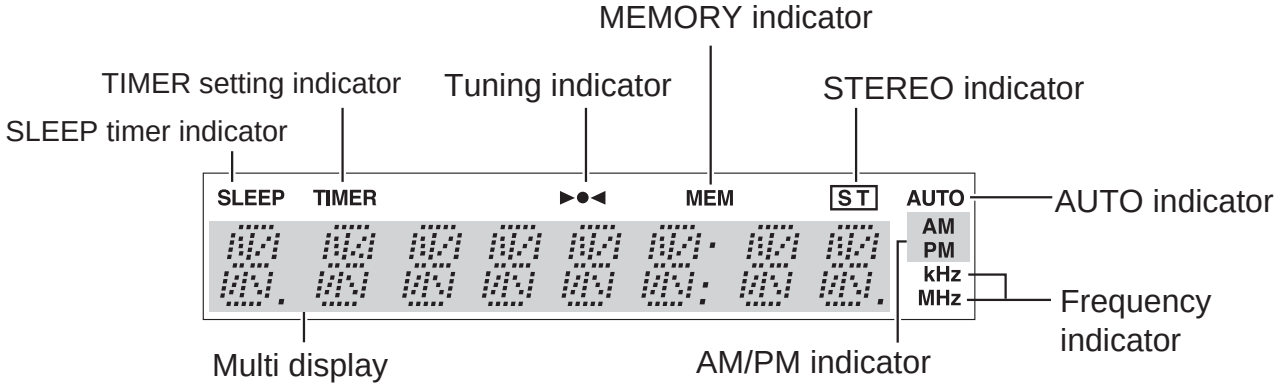
This unit does not require memory preservation batteries. A built-in memory power back-up system preserves the contents of the memory during power failures and even when the unit is unplugged.The unit must be plugged in order to charge the back-up system.
The memory preservation period after the unit has been unplugged varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time the unit has been unplugged. This period is shorter when the unit is exposed to a highly humid climate.

PANEL VIEW

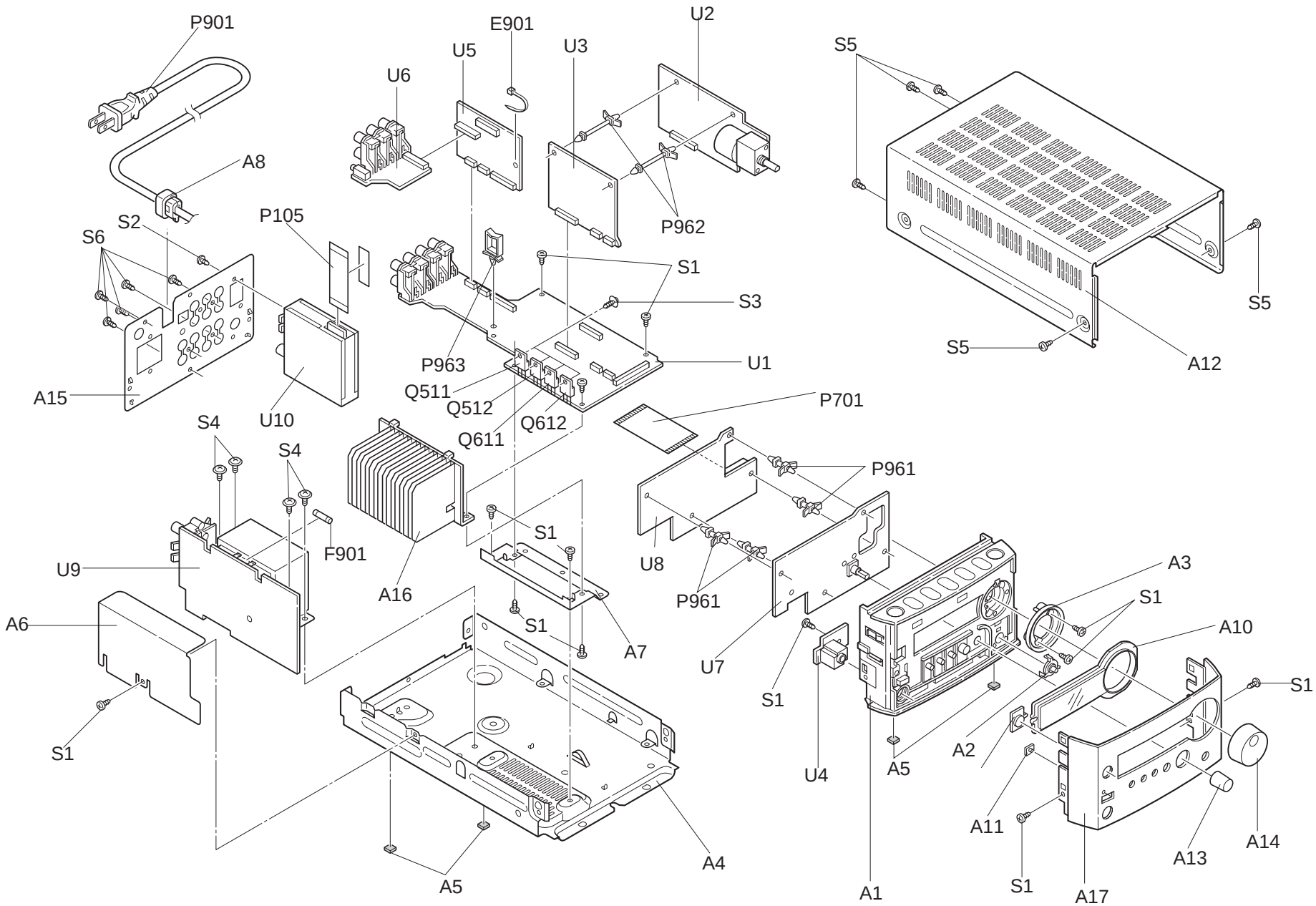
FRONT PANEL



Display section



EXPLODED VIEW



PARTS LIST

EXPLODED VIEW SECTION

REF. NO.	PART NO.	DESCRIPTION
A1	27111247	Front bracket
A2	28325974A	Acoustic presence ass'y,Knob
A3	27268056	Volume,Guide
A4	27100410	Chassis
A5	28141489	Cushion
A6	28175276	Insulation plate
A7	27130872	HT,Bracket
A8	27300750	⚠ #2271,Bushing
A10	28191953	Clear plate <PP>
	28191940	Clear plate <DT,GR,GT>
A11	28198938	Facet
A12	28184824	Cover
A13	28325962	Tuner,Knob
A14	28325963	Volume ass'y,Knob
A15	27122905	Rear panel
A16	27160478	RAD-147,Heat sink
A17	27212348	Front panel <PP>
	27212347	Front panel <DT,GR,GT>
F901	252082 or	⚠ 0.315A-SE-EAWK,Fuse <PP,GR,GT>
	252232 or	⚠ 315MA-SE-TL250V,Fuse <PP,GR,GT>
	252266	⚠ 315MA-SE-TL250V,Fuse <PP,GR,GT>
	252156 or	⚠ 1A-UL/T-237,Fuse <DT>
	252250	⚠ 1A-T/UL-ST2,Fuse <DT>
P901	253332HIT or	⚠ AS-UC-2,Power supply cord <DT>
	253333VOL	⚠ AS-UC-2,Power supply cord <DT>
	253335HIT or	⚠ AS-CEE,Power supply cord <PP,GT>
	253336VOL	⚠ AS-CEE,Power supply cord <PP,GT>
	253337HIT or	⚠ AS-CCEE,Power supply cord <GR>
	253338VOL	⚠ AS-CCEE,Power supply cord <GR>
Q511,Q611	2203595 or	● KTC2026-GR,Transistor
	2203383 or	● 2SC3851-O,Transistor
	2203384 or	● 2SC3851-Y,Transistor
	2203385 or	● 2SC3851-G,Transistor
	2203594	● KTC2026-Y,Transistor
Q512,Q612	2203615 or	● KTA1046-GR,Transistor
	2203393 or	● 2SA1488-O,Transistor
	2203394 or	● 2SA1488-Y,Transistor
	2203395 or	● 2SA1488-G,Transistor
	2203614	● KTA1046-Y,Transistor
S1	838130088	3TTB+8B,Self tapping screw
S2	838430068	3TTB+6B(BC),Self tapping screw
S3	801433	3SMS8W.SW+14B(BC),Self tapping screw
S4	830440069	4TTC+6C(BC),Self tapping screw
S5	838930088	3TTB+8B(UN),Self tapping screw
T901	2301558	⚠ NPT-1427P,Power transformer <PP>
	2301557	⚠ NPT-1427D,Power transformer <DT>
	2301559	⚠ NPT-1427G,Power transformer <GR,GT>
E901	260208	BINDER(CLAMPER)UL
P105	2047150512	NCFC7-150512,FFC
P701	2047270512	NCFC7-270512,FFC
P961	27190011	KGLS-6S,Holder
P962	27190470	HOLDER KGLS-18S,Holder

REF. NO.	PART NO.	DESCRIPTION
U1	1A916536-1B	NAAF-7336-1B,Main PC board <PP>
	1A916536-1C	NAAF-7336-1C,Main PC board <DT>
	1A916536-1D	NAAF-7336-1D,Main PC board <GR>
	1A916536-1E	NAAF-7336-1E,Main PC board <GT>
U2	1A916537-1B	NAAF-7337-1B,Acoustic PC board <PP>
	1A916537-1C	NAAF-7337-1C,Acoustic PC board <DT>
	1A916537-1D	NAAF-7337-1D,Acoustic PC board <GR>
	1A916537-1E	NAAF-7337-1E,Acoustic PC board <GT>
U3	1A916538-1B	NAAF-7338-1B,Driver PC board <PP>
	1A916538-1C	NAAF-7338-1C,Driver PC board <DT>
	1A916538-1D	NAAF-7338-1D,Driver PC board <GR>
	1A916538-1E	NAAF-7338-1E,Driver PC board <GT>
U4	1A916539-1B	NAETC-7339-1B,Headphone PC board <PP>
	1A916539-1C	NAETC-7339-1C,Headphone PC board <DT>
	1A916539-1D	NAETC-7339-1D,Headphone PC board <GR>
	1A916539-1E	NAETC-7339-1E,Headphone PC board <GT>
U5	1A916540-1B	NAETC-7340-1B,Connection PC board <PP>
	1A916540-1C	NAETC-7340-1C,Connection PC board <DT>
	1A916540-1D	NAETC-7340-1D,Connection PC board <GR>
	1A916540-1E	NAETC-7340-1E,Connection PC board <GT>
U6	1A916541-1B	NAETC-7341-1B,Input/Output PC board <PP>
	1A916541-1C	NAETC-7341-1C,Input/Output PC board <DT>
	1A916541-1D	NAETC-7341-1D,Input/Output PC board <GR>
	1A916541-1E	NAETC-7341-1E,Input/Output PC board <GT>
U7	1A916542-1B	NADIS-7342-1B,Display PC board <PP>
	1A916542-1C	NADIS-7342-1C,Display PC board <DT>
	1A916542-1D	NADIS-7342-1D,Display PC board <GR>
	1A916542-1E	NADIS-7342-1E,Display PC board <GT>
U8	1A916543-1B	NADG-7343-1B,Microprocessor PC board <PP>
	1A916543-1C	NADG-7343-1C,Microprocessor PC board <DT>
	1A916543-1D	NADG-7343-1D,Microprocessor PC board <GR>
	1A916543-1E	NADG-7343-1E,Microprocessor PC board <GT>
U9	1A916544-1B	NAPS-7344-1B,Power supply PC board <PP>
	1A916544-1C	NAPS-7344-1C,Power supply PC board <DT>
	1A916544-1D	NAPS-7344-1D,Power supply PC board <GR>
	1A916544-1E	NAPS-7344-1E,Power supply PC board <GT>
U10	240135 or	TFCE1E512A
	240139A	ENG07501QR

CAUTION:

Replacement for transistor of mark●, if necessary must be made from the same beta group (hFE) as the original type.

Note
<PP>.....European model only <DT>.....120V model only <GT,GR>...220-230V model only
THE COMPONENTS IDENTIFIED BY MARK⚠ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

SCHEMATIC DIAGRAM 3

NADIS-7342 **U7** Display PC board

NADG-7343

Q705 HNA-09SS27T

Q701 MPD78045FGF-***

Q706 RN2403 OR KRA103S

Q703 RN1404 OR KRC104S

Q704 BU1923F

TA7291S Q702

X702 AF6146CG (4.332MHZ)

X701 XTL-4.19M

D701 RL1N4003 OR 1SR139-100 OR GP104003E

D702 RL1N4003 OR 1SR139-100 OR GP104003E

D703 1SS355 OR 1SS355

D704 1SS352 OR 1SS355

D705 UDZ5.1B

D706 UDZ5.1B

D707 SLR-332VR ENERGY SAVE (RED)

D708 SLR-332DU ACOUSTIC PRESENCE (ORANGE)

U701 SPS-444-1

S701 S702 MEMORY S703 ACOUSTIC PRESENCE S704 INPUT S705 MODE S706 DISPLAY S707 STANDBY /ON

L701 NCH-1477 220K

L702 NCH-1477 220K

L703 NCH-1477 220K

P7018

TO NCAF-7336 (1) PAGE

RDS ONLY MPP TYPE

	RDS R727 R728 R729	R712	R713	R734
MJJ	NO	NO	10K	ONLY OTP
MPP	YES	10K	NO	ONLY OTP
MDT	NO	5.6K	3.3K	ONLY OTP
MGT	NO	5.6K	3.3K	ONLY OTP
MGR	NO	5.6K	3.3K	ONLY OTP

NOTE

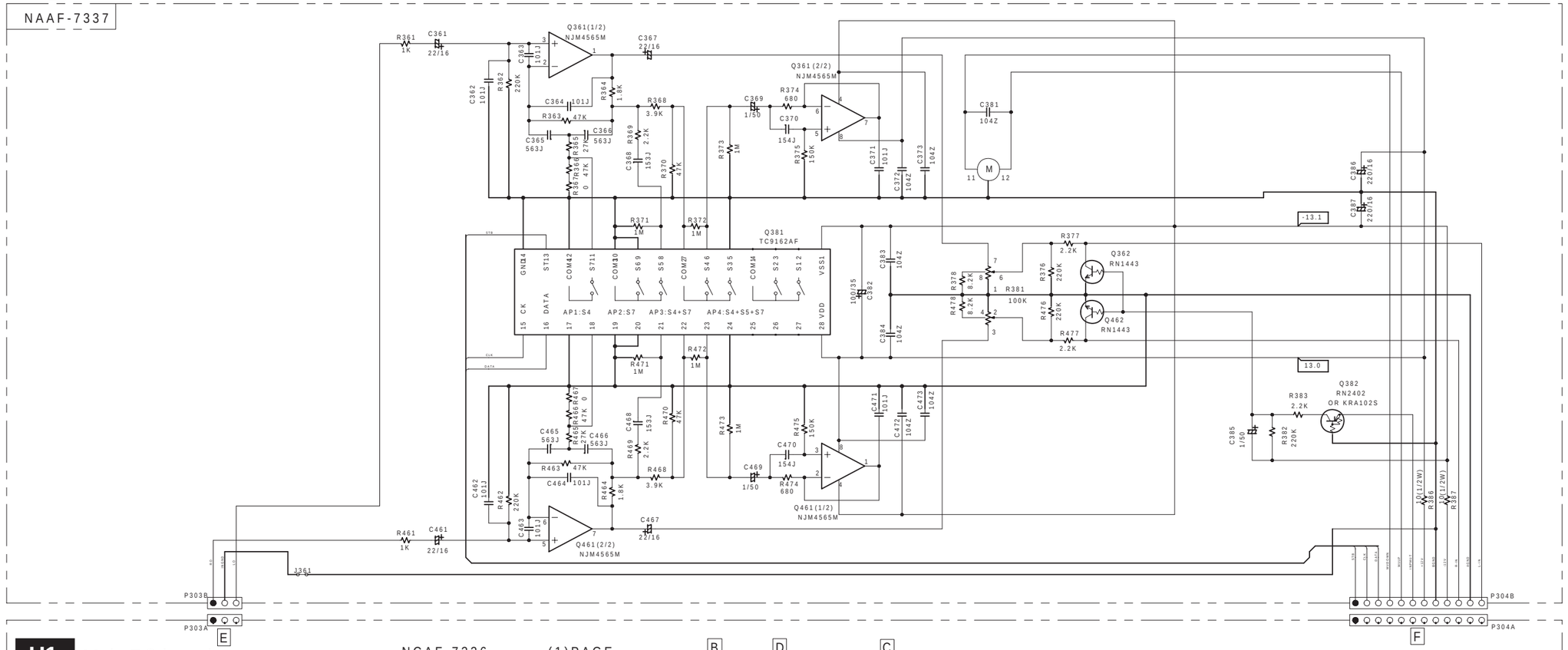
- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ⟨⟩ : DC VOLTAGE (NO INPUT SIGNAL)
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030→30pF 330→330pF 331→330pF 333→0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ⟨⟩ : PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

U8 Microprocessor PC board

SCHEMATIC DIAGRAM 2

U2 Acoustic PC board

NAAF-7337

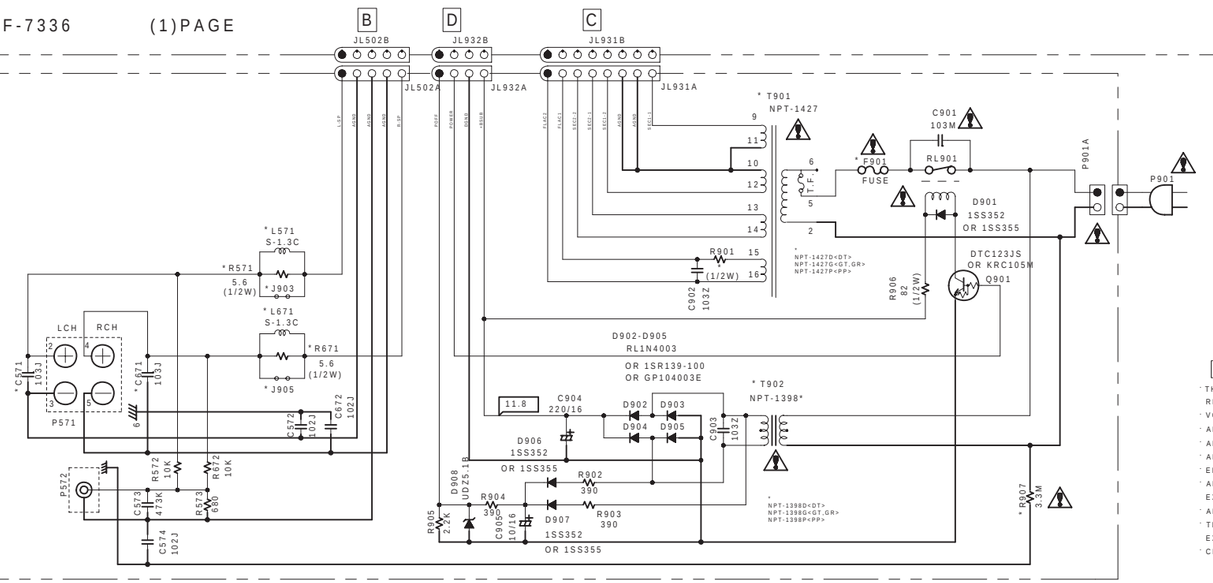


U1 Main PC board

NCAF-7336 (1)PAGE

NAPS-7344

	C571,C671 L571,L671 R571,R671	J903 J905	F901	T901	T902	R907	R901
MJJ	NO	YES	1.25A/125V	NPT-1427J	NPT-1398J	NO	5.6
MPP	YES	NO	T315mAL250V	NPT-1427P	NPT-1398P	NO	10
MDT	YES	NO	1A/125V	NPT-1427D	NPT-1398D	YES	5.6
MGT	YES	NO	T315mAL250V	NPT-1427G	NPT-1398G	NO	5.6
MGR	YES	NO	T315mAL250V	NPT-1427G	NPT-1398G	NO	5.6



U9 Power supply circuit PC board

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY REPLACE ONLY WITH PART NUMBERS SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER IS DC VOLTAGE (NO INPUT SIGNAL)
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS ( ) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030 = 30pF 330 = 330pF 333 = 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

SCHEMATIC DIAGRAM 1

U2 Acoustic PC board

U3 Driver PC board

U4 Headphone PC board

U1 Main PC board

U6 Input/Output PC board

U5 Connection PC board

NAAF-7336

NAAF-7337

NAAF-7338

NAETC-7339

NAETC-7341

NAETC-7340

(2) PAGE

A.PRES,VOL

MD

CD-R /PC

CD/DVD

TAPE

TU

TA-P

TA-R

CD

MD-P

MD-R

CD-P

CD-R

P305 FREQUENCY ADJUST

ONLY MPP

TO TUNER PACK

TO NCDG-7343 (3) PAGE

TO NCPS-7344 (2) PAGE

RIGHT

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE MEASURED WITH VOLTMETER (10 MΩ DC VOLTAGE) (NO INPUT SIGNAL)
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS ARE IN μF/WV.
- ALL CAPACITORS ARE IN μF/50WV UNLESS OTHERWISE NOTED.
  EX) 0.33=.33μF 330=330μF 331=330pF 333K=.033μF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ▬▬ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

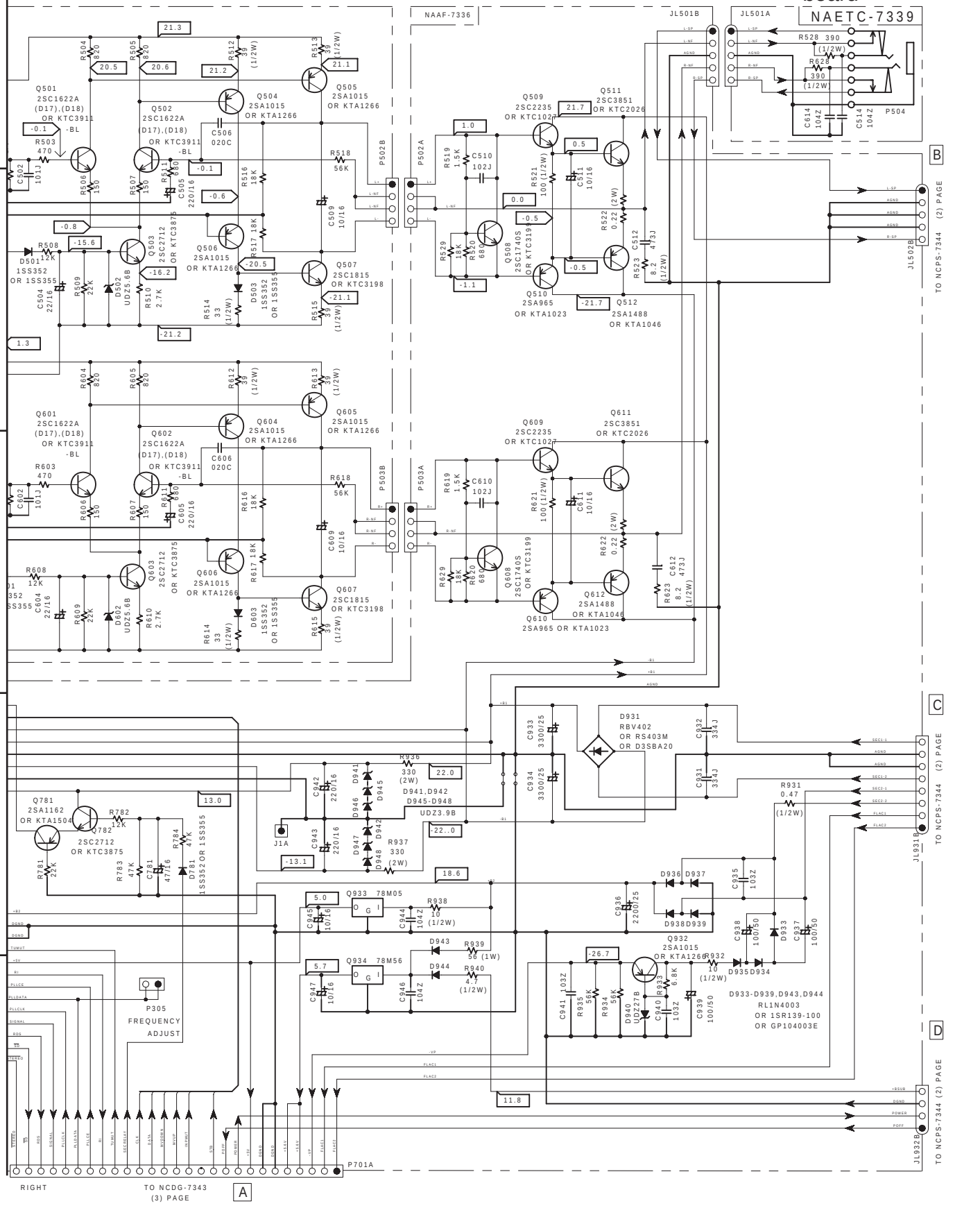
	C503	C603
MJJ	NO	
MPP	YES	
MDT	YES	
MGT	YES	
MGR	YES	

SCHEMATIC DIAGRAM 1-2

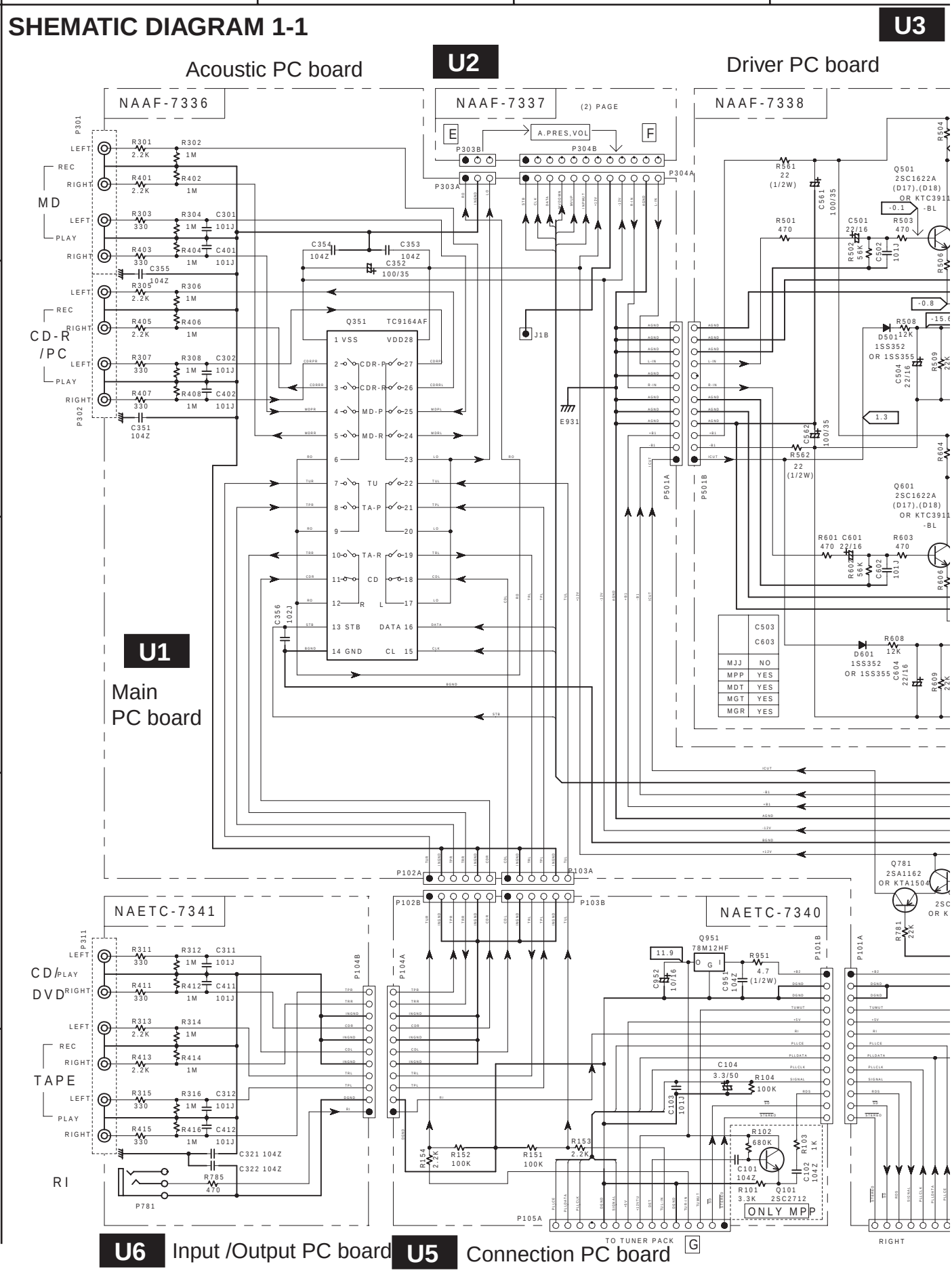
U3 Driver PC board

U1 Main PC board

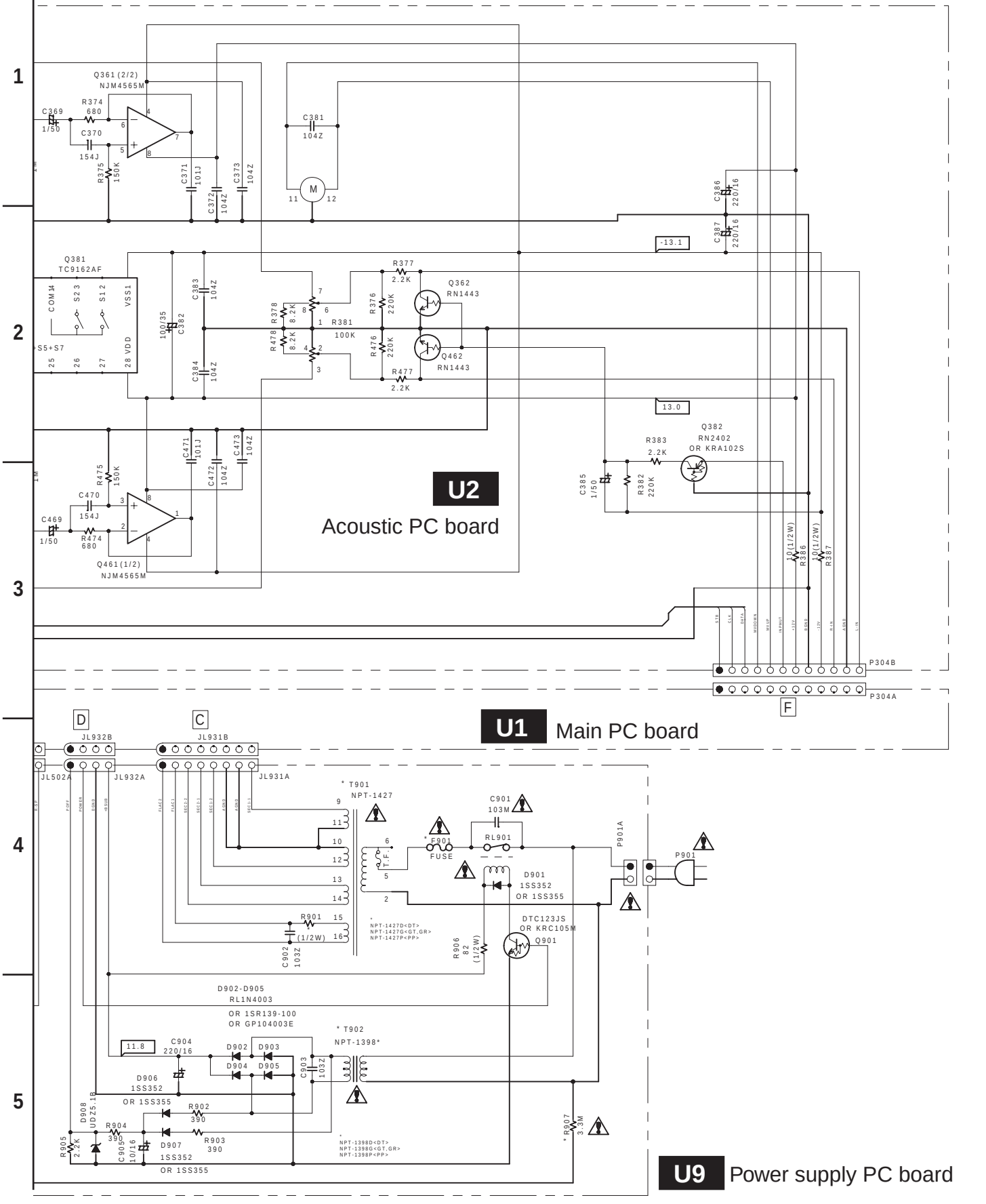
U4 Headphone PC board



SHEMATIC DIAGRAM 1-1



SCHEMATIC DIAGRAM 2-2



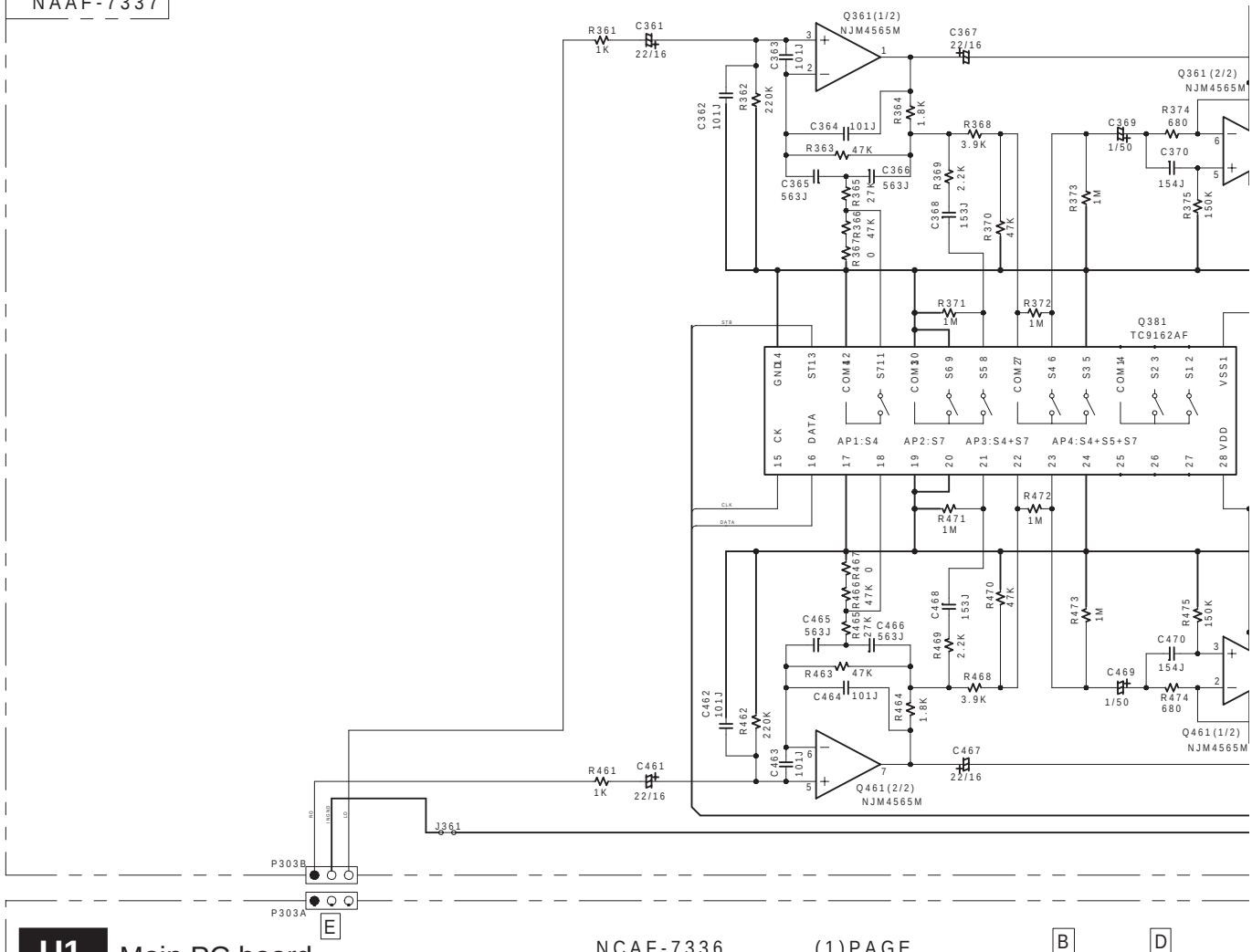
A B C D

1 2 3 4 5

SCHEMATIC DIAGRAM 2-1

U2 Acoustic PC board

NAAF-7337

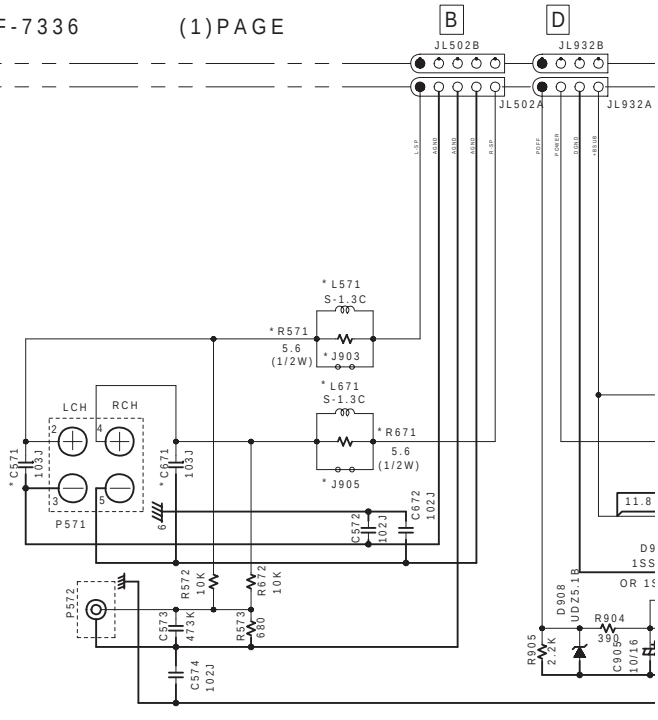


U1 Main PC board

NCAF-7336 (1)PAGE

NAPS-7344

	C571,C671 L571,L671 R571,R671	J903 J905	F901	T901	T902	R907	R901
MJJ	NO	YES	1.25A/125V	NPT-1427J	NPT-1398J	NO	5.6
MPP	YES	NO	T315mAL250V	NPT-1427P	NPT-1398P	NO	10
MDT	YES	NO	1A/125V	NPT-1427D	NPT-1398D	YES	5.6
MGT	YES	NO	T315mAL250V	NPT-1427G	NPT-1398G	NO	5.6
MGR	YES	NO	T315mAL250V	NPT-1427G	NPT-1398G	NO	5.6



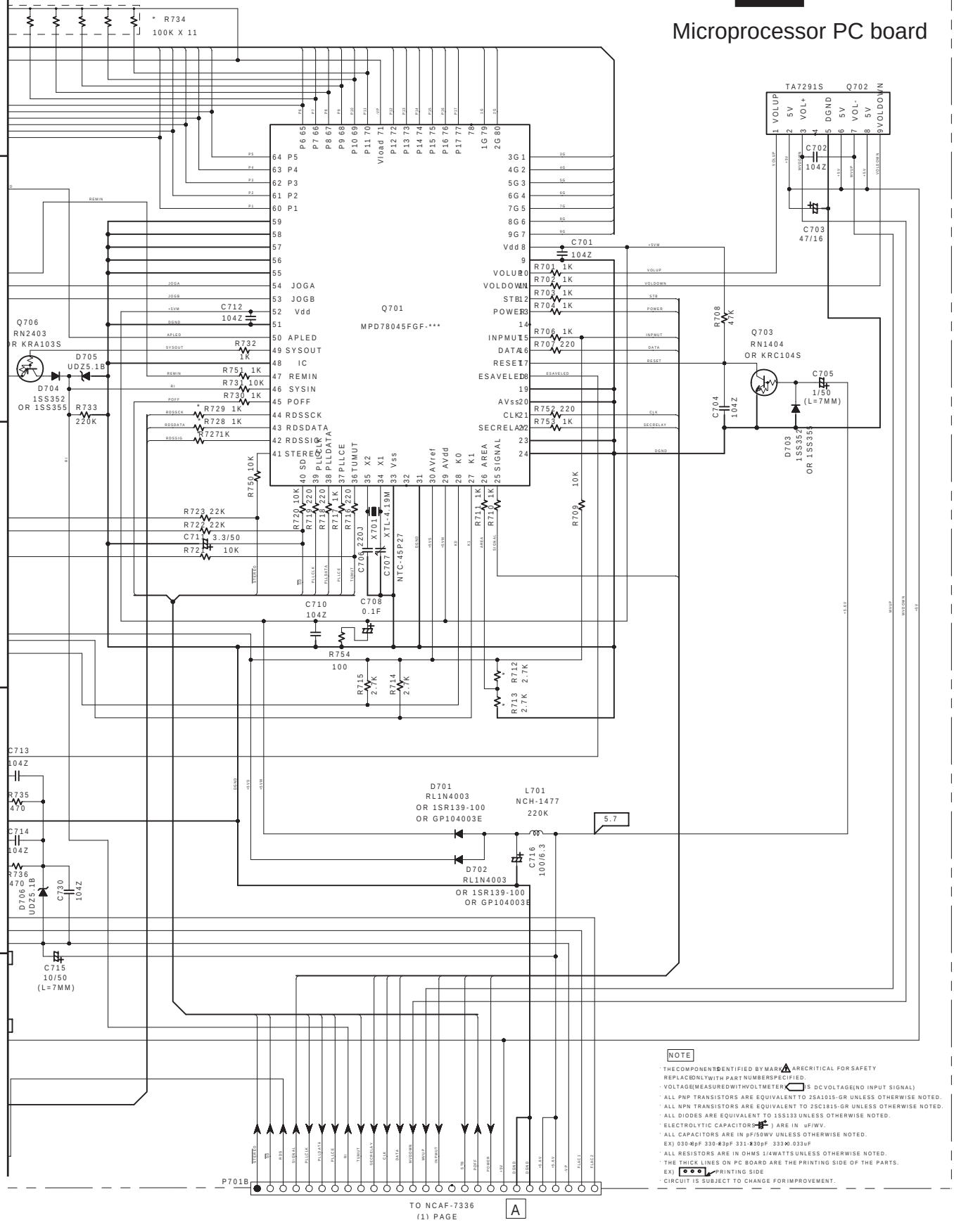
U9 Power supply PC board

A B C D

SCHEMATIC DIAGRAM 3-2

U8

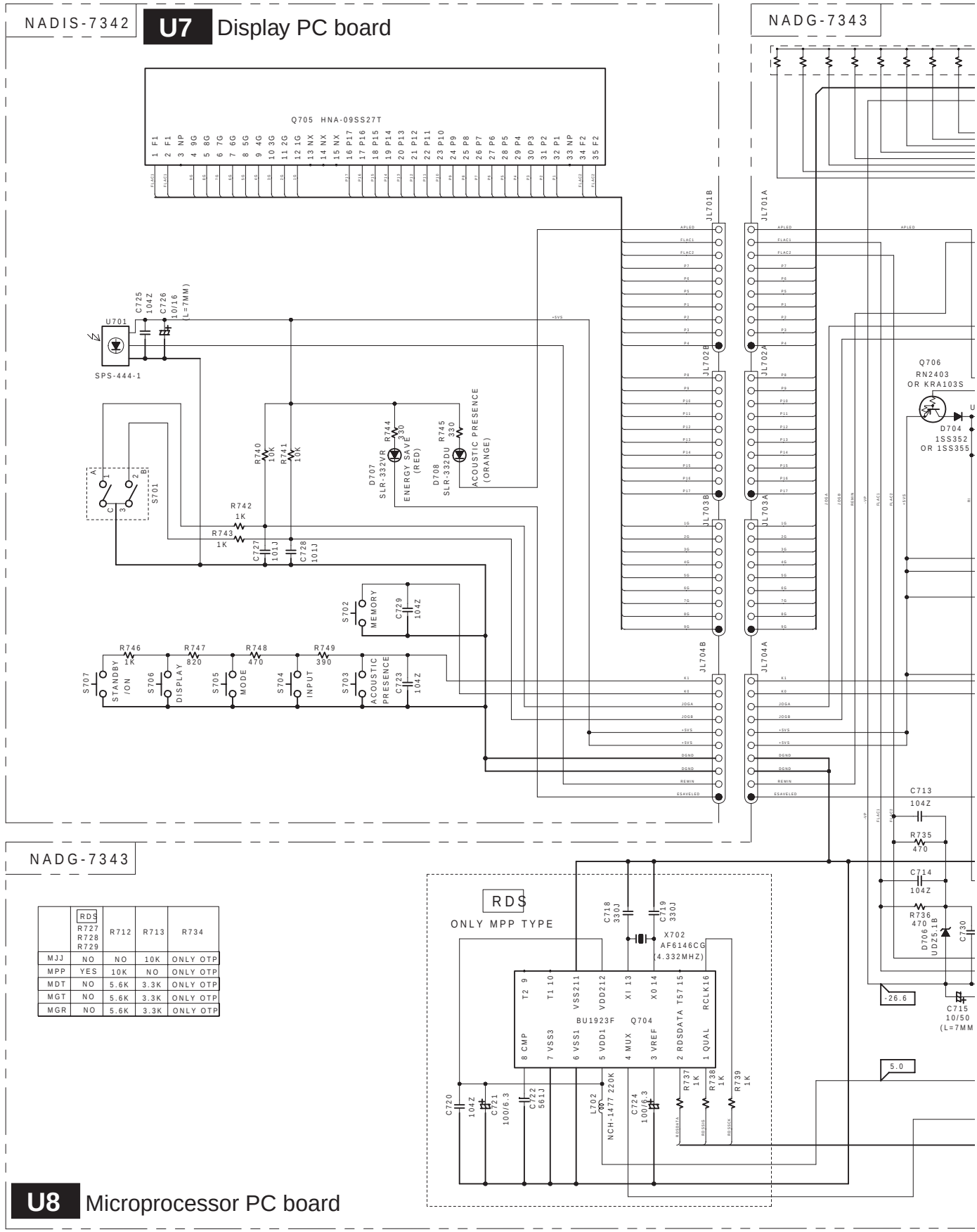
Microprocessor PC board



NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) IS DC VOLTAGE (NO INPUT SIGNAL)
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS ( ) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030→30pF 330→330pF 331→330pF 333→0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

SCHEMATIC DIAGRAM 3-1

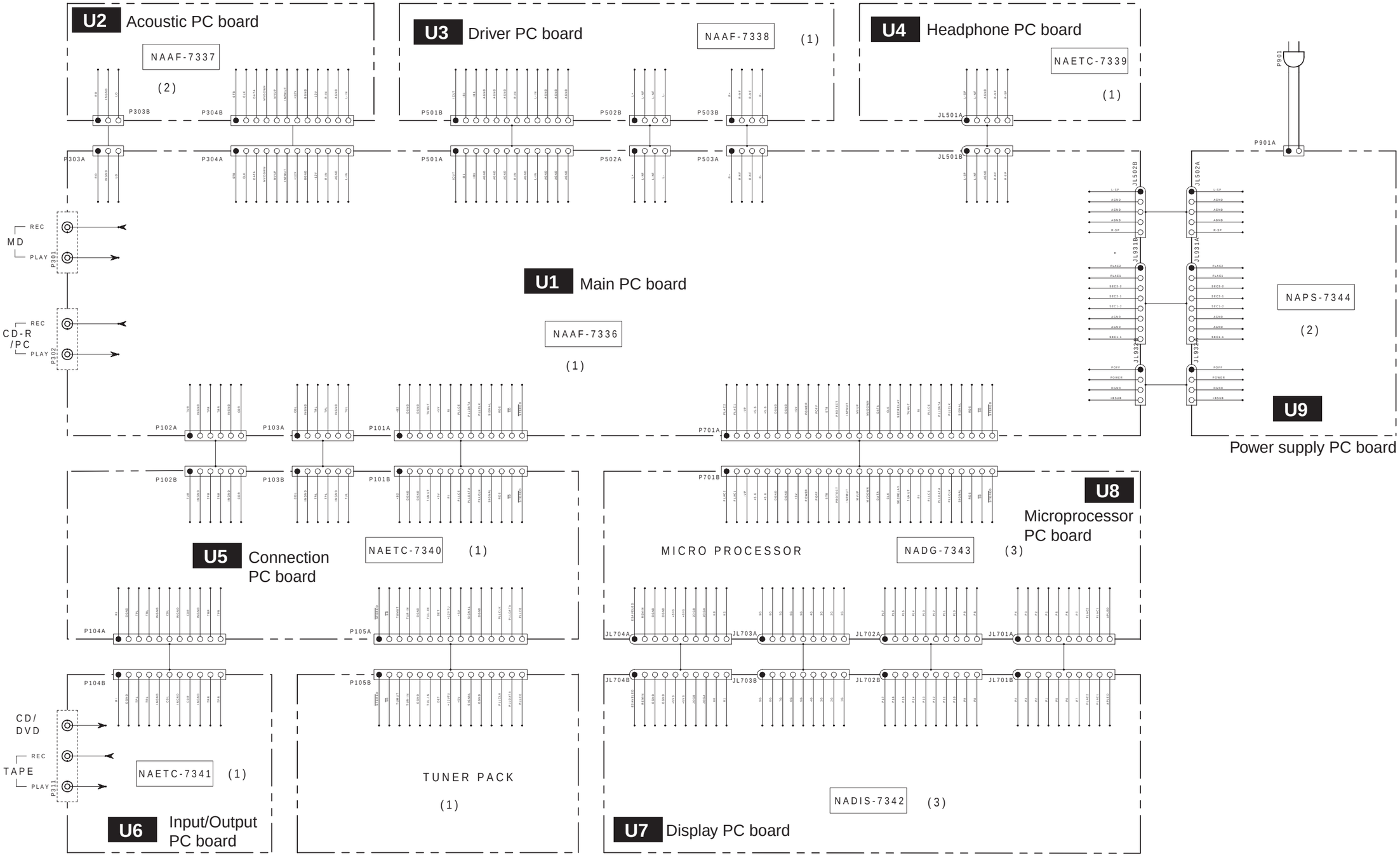


	RDS R727 R728 R729	R712	R713	R734
MJJ	NO	NO	10K	ONLY OTP
MPP	YES	10K	NO	ONLY OTP
MDT	NO	5.6K	3.3K	ONLY OTP
MGT	NO	5.6K	3.3K	ONLY OTP
MGR	NO	5.6K	3.3K	ONLY OTP

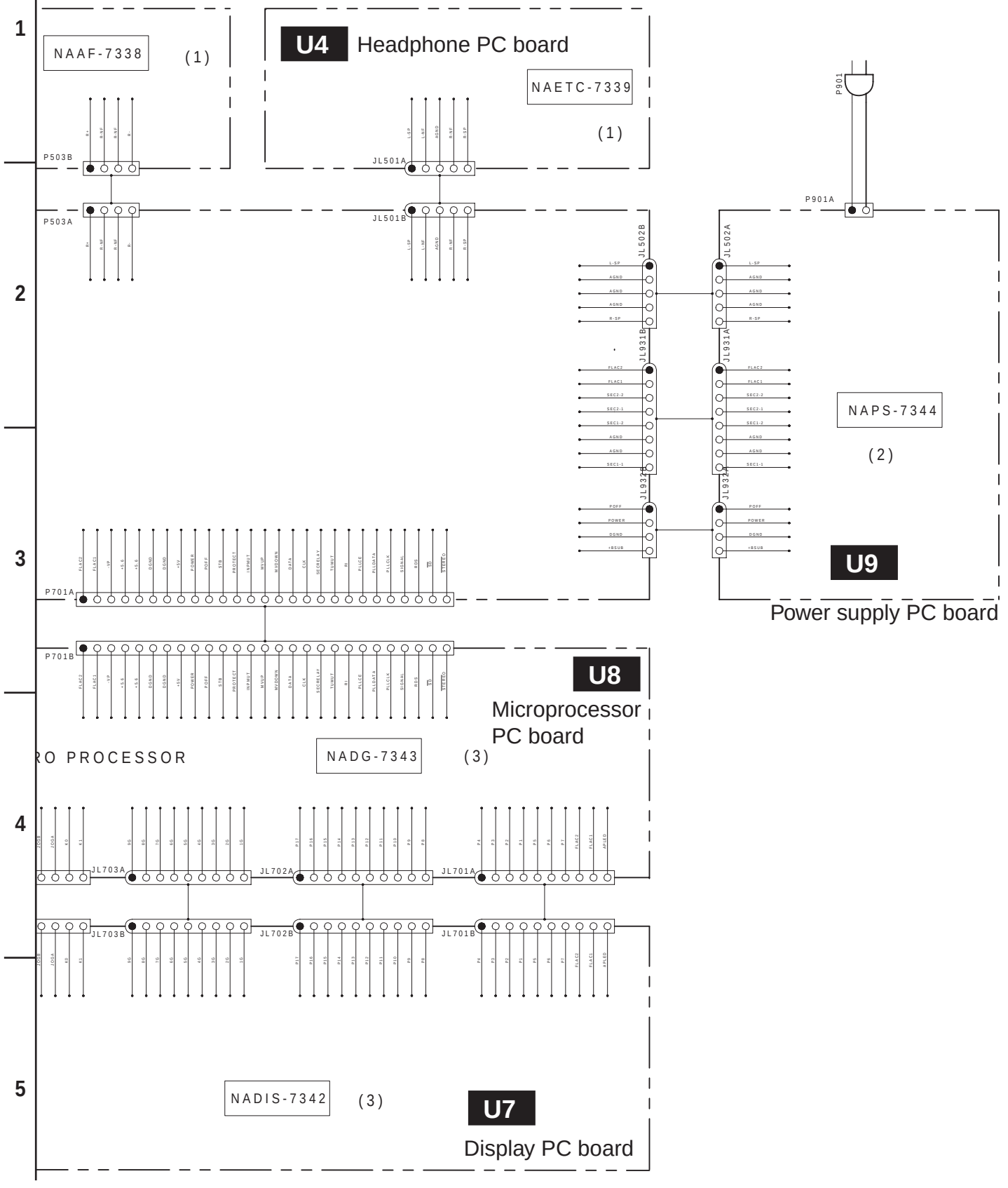
A B C D E F G H

1 2 3 4 5

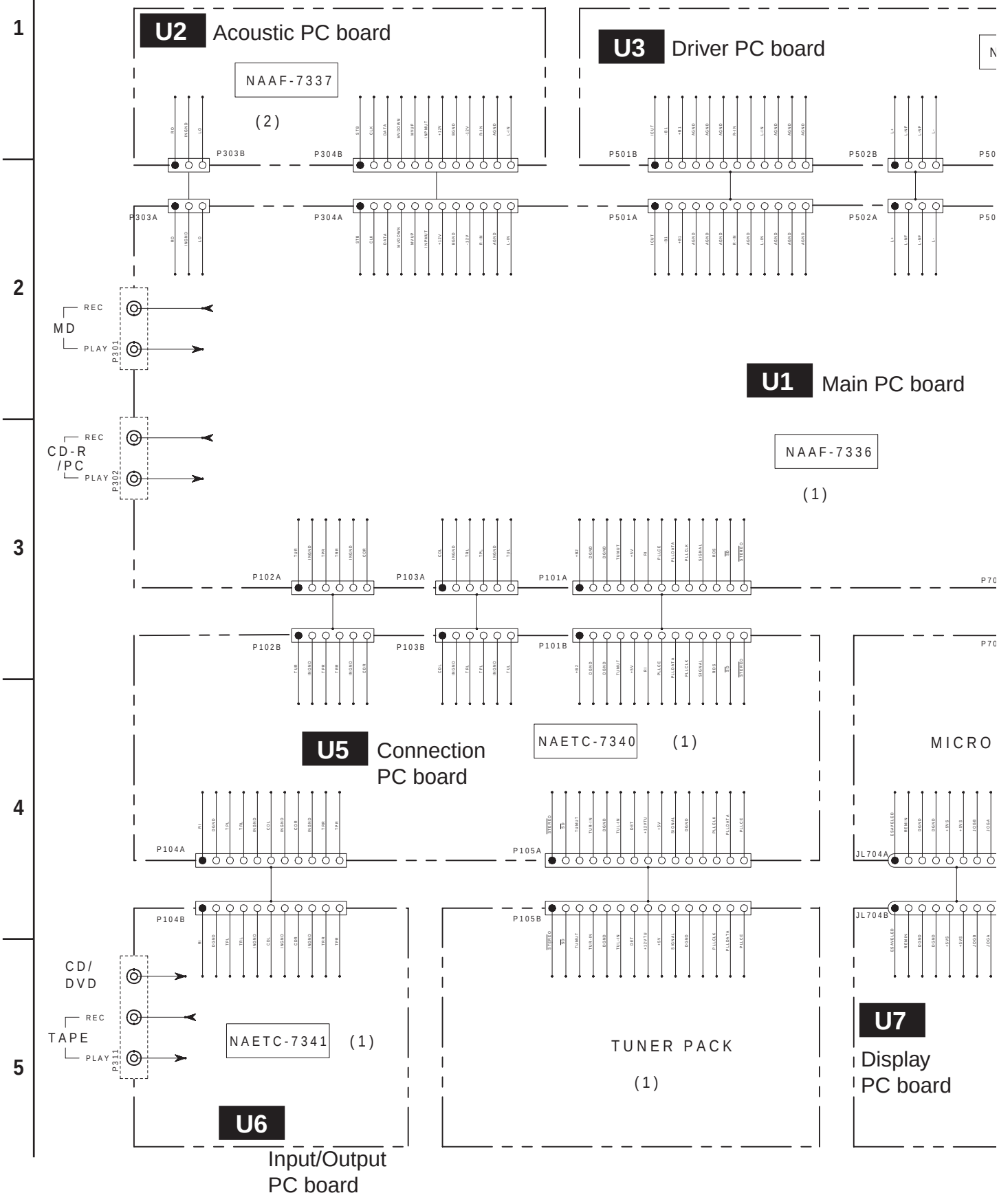
WIRING DIAGRAM



WIRING DIAGRAM 2



WIRING DIAGRAM 1

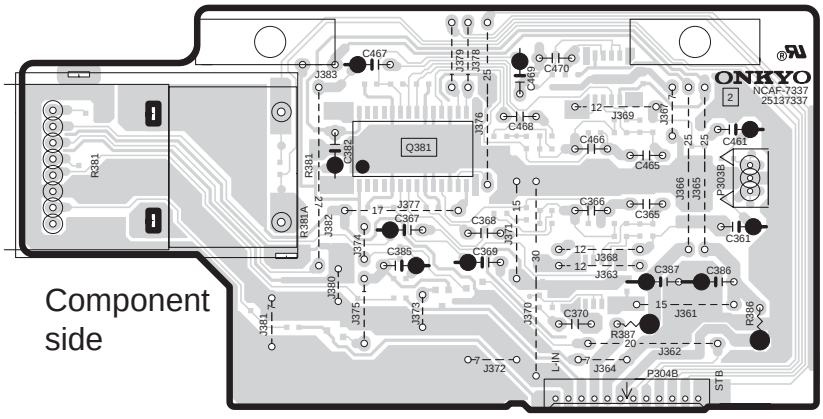


A B C D

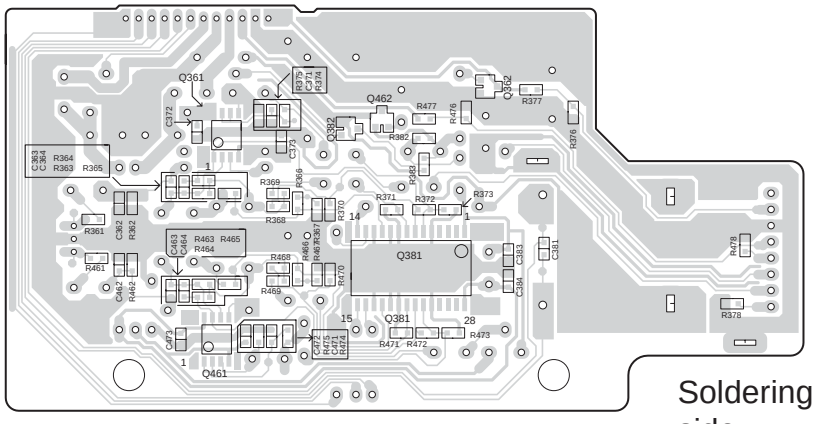
1 2 3 4 5

PRINTED CIRCUIT BOARD FROM SOLDERING SIDE 1-2

U2 Acoustic PC board NAAF-7337

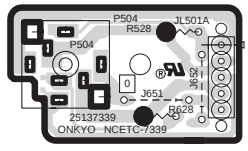


Component side

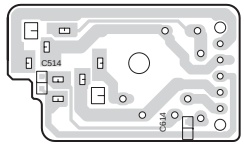


Soldering side

U4 Headphone PC board NAETC-7339

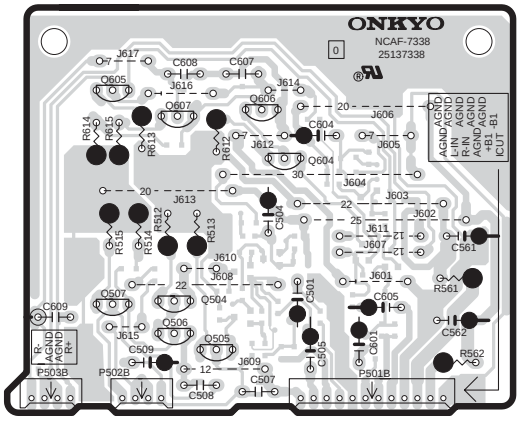


Component side

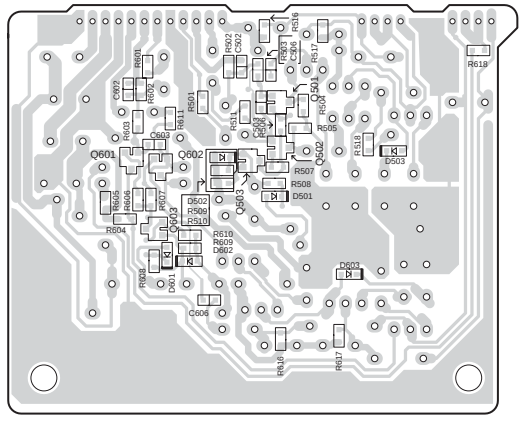


Soldering side

U3 Driver PC board NAAF-7338



Component side



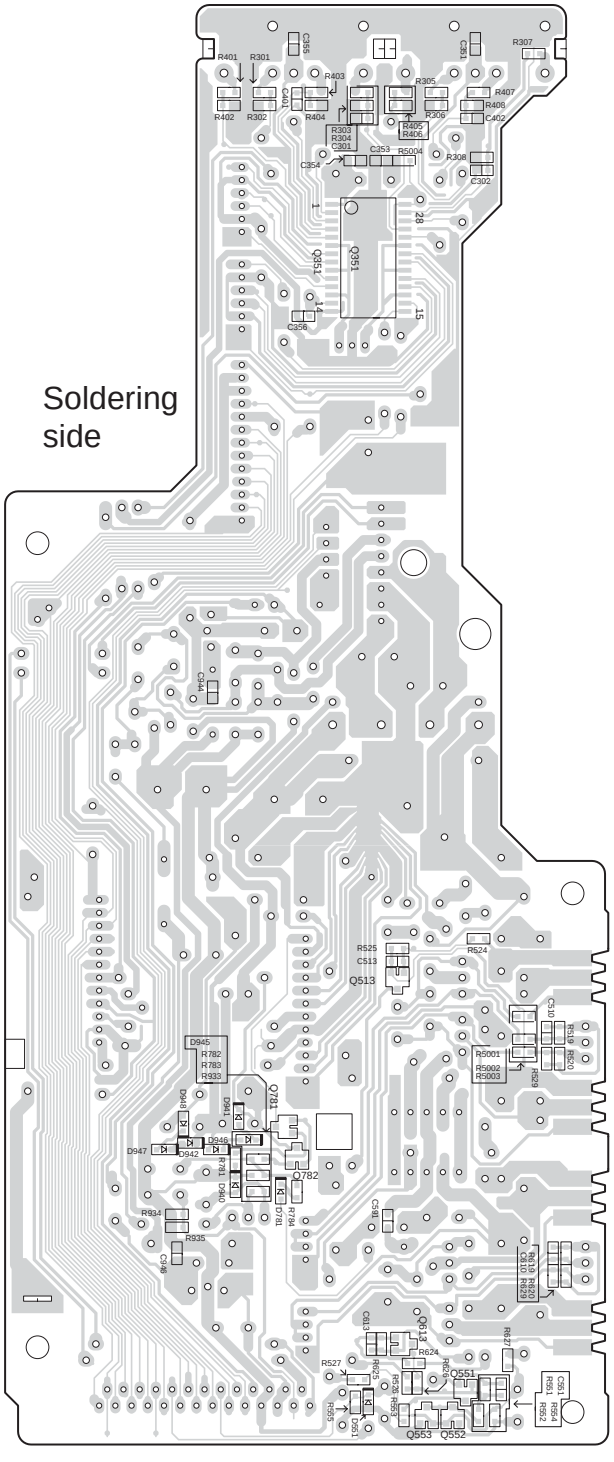
Soldering side

A B C D

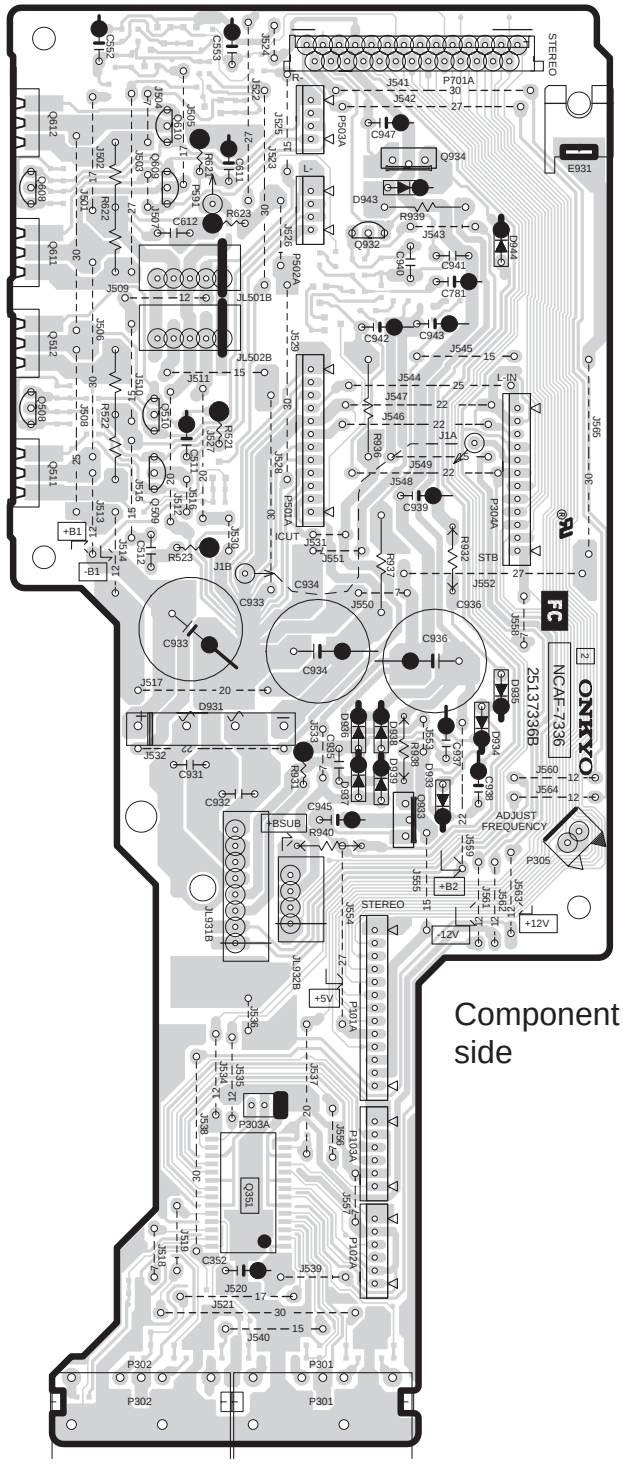
1 2 3 4 5

PRINTED CIRCUIT BOARD FROM SOLDERING SIDE 1-1

U1 Main PC board
NAAF-7336



Soldering side



Component side

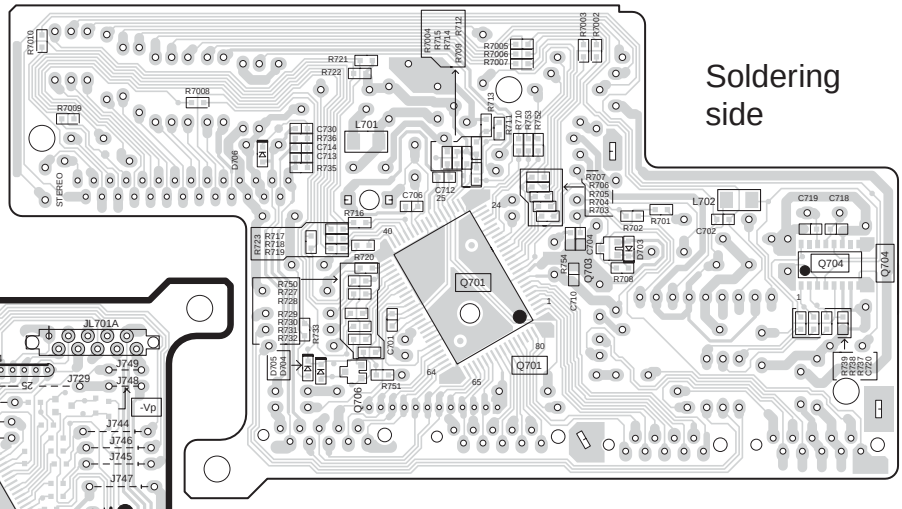
A B C D

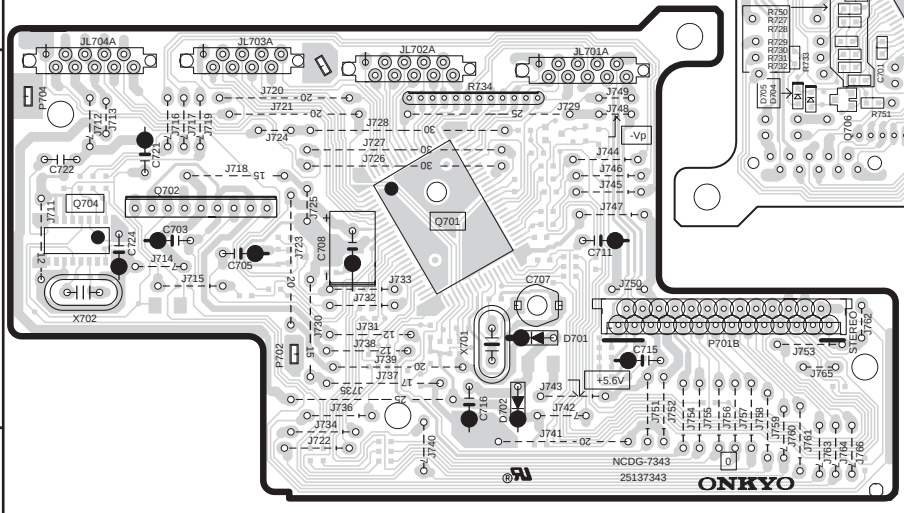
1 2 3 4 5

PRINTED CIRCUIT BOARD FROM SOLDERING SIDE 2-2

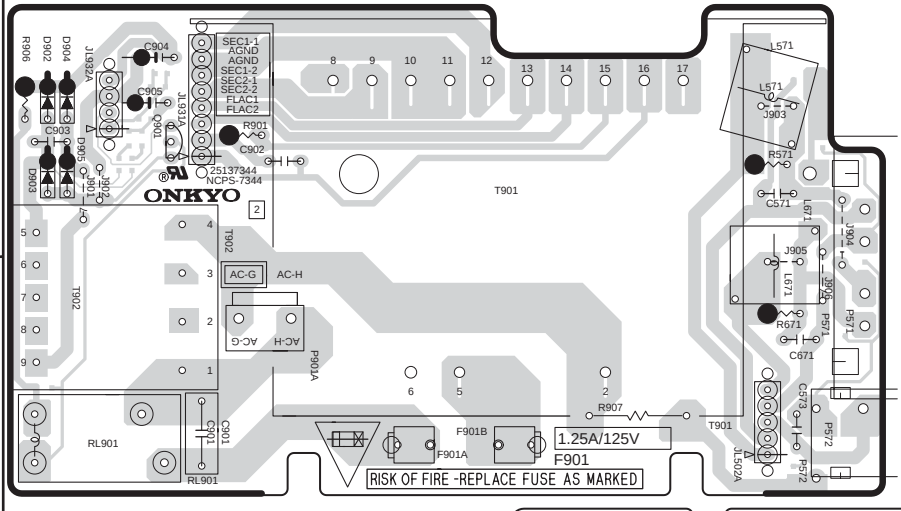
U8

Microprocessor
PC board
NADG-7343





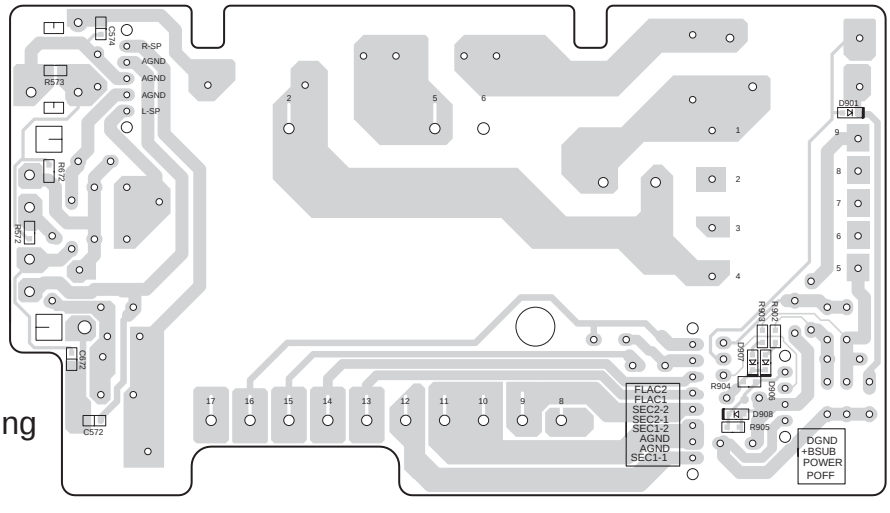
Component side



Component side

U9

Power supply
PC board
NAPS-7344

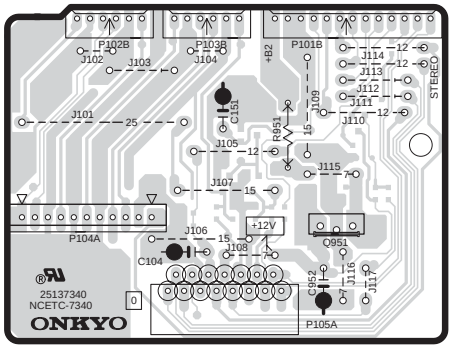


Soldering side

PRINTED CIRCUIT BOARD FROM SOLDERING SIDE 2-1

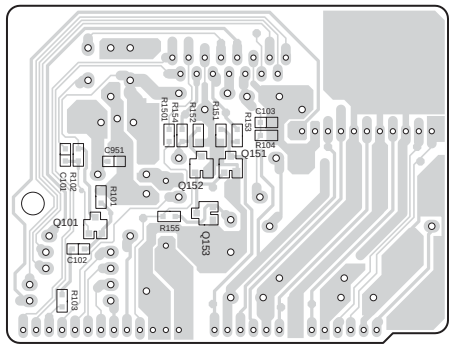
U5

Connection PC board
NAETC-7340



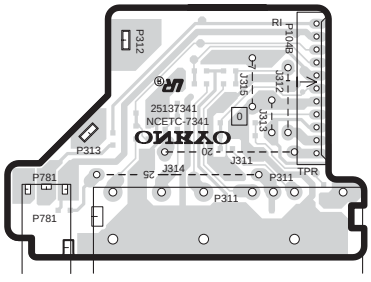
Component side

Soldering side



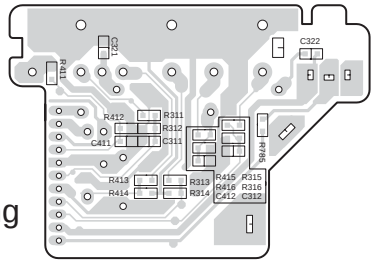
U6

Input/Output
PC board
NAETC-7341



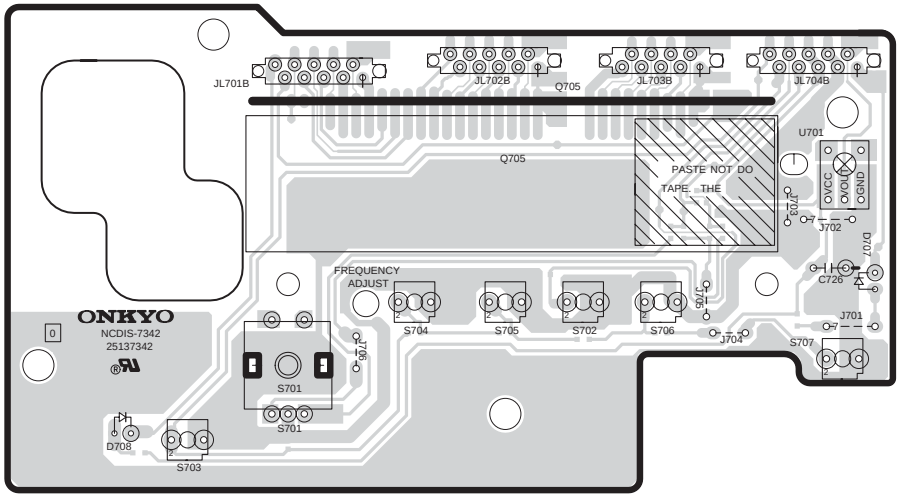
Component side

Soldering side

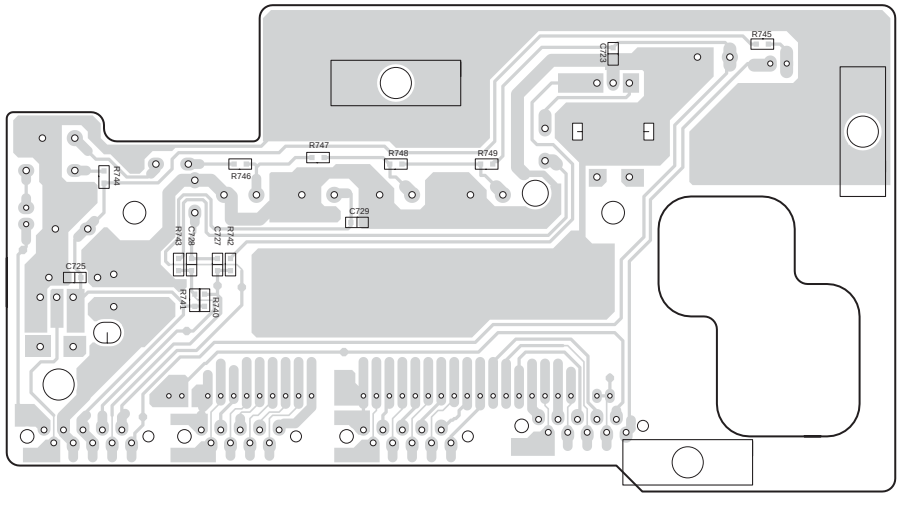


U7

Display PC board
NADIS-7342



Component side



Soldering side

PARTS LIST

CIRCUIT SECTION 1

U1	Main PC board(NAAF-7336-1B/1C/1D/1E)	
REF. NO.	PART NO	DESCRIPTION
	ICs	
Q351	22241221R2	TC9164AF
Q933	222780055JRC or	78M05(NJM78M05FA)
	222780055MIT or	78M05L(M5F78M05L)
	222780055NEC	78M05HF(MPC78M05HF)
Q934	222780565JRC	78M56(NJM78M56FA)
	Transistors	
Q508,Q608	2215864 or	KTC3199-GR
	2212115 or	2SC2458-GR
	2213284 or	2SC1740S-R
	2213285	2SC1740S-S
Q509,Q609	2216563 or	KTC1027-O
	2211654 or	2SC2235-Y
	2216564	KTC1027-Y
Q510,Q610	2216573 or	KTA1023-O
	2211644 or	2SA965-Y
	2216574	KTA1023-Y
Q781	2216185R2 or	KTA1504-GR
	2214374R2	2SA1162-Y
Q782	2216175R2 or	KTC3875-GR
	2213143R2 or	2SC2712-O
	2213144R2 or	2SC2712-Y
	2213145R2 or	2SC2712-GR
	2216173R2 or	KTC3875-O
	2216174R2	KTC3875-Y
Q932	2215975 or	KTA1266-GR
	2211455	2SA1015-GR
	Diodes	
D931	22380271 or	D3SBA20
	22380022 or	RBV402
	22380285	RS403M
D933-D939	22380260 or	RL1N4003
	22380032 or	1SR139-100
	22380035	GP104003E
D934,D944	22380032	1SR139-100
D943,D944	22380260 or	RL1N4003
	22380035	GP104003E
D781	223234R2 or	1SS352,Chip
	223269R2	1SS355,Chip
D940	224492700R2 or	UDZ27B,Zener
	224552700R2	UDZS27B,Zener
D941,D942	224490390R2 or	UDZ3.9B,Zener
	224550390R2 or	UDZS3.9B,Zener
D945-D948	224490390R2 or	UDZ3.9B,Zener
	224550390R2	UDZS3.9B,Zener

U1	Main PC board(NAAF-7336-1B/1C/1D/1E)	
REF. NO.	PART NO	DESCRIPTION
	Capacitors	
C352,C937	354761019	100uF,35V,Elect.
C511,C611	354741009	10uF,16V,Elect.
C781	354744709	47uF,16V,Elect.
C938,C939	354781019	100uF,50V,Elect.
C942,C943	354742219	200uF,16V,Elect.
C945,C947	354741009	10uF,16V,Elect.
C933,C934	393353327	3300uF,25V,Elect.
C936	393352227	3300uF,25V,Elect.
C512,C612	374724734	ECQ-V50V-473J,Plastic film
C931,C932	374723344	ECQ-V50V-334J,Plastic film
C512,C612	374724734	ECQ-V50V-473J,Plastic film
C931,C932	374723344	ECQ-V50V-334J,Plastic film
	Resistors	
R521,R621	443521014	100ohm +/-5%,1/2W,Metal oxide
R932,R938	442521004	10ohm +/-5%,1/2W,Metal oxide
R936,R937	442723314	330ohm +/-5%,2W,Metal oxide
R939	442625604	56ohm +/-5%,1W,Metal oxide
R522,R622	4500027	0.22ohm +/-5%,2W,Metal plate
R523,R623	453530824	8.2ohm +/-5%,1/2W,Metal
R931	453534794	0.47ohm +/-5%,1/2W,Metal
R940	452530474	4.7ohm +/-5%,1/2W,Metal
R522,R622	4800071	RSS2WK-0.22,Cement resistor
	Plugs	
P101A	25055709	NPLG-13P665
P102A,P103A	25055702	NPLG-6P658
P304A,P501A	25055708	NPLG-12P664
P305	25055038	NPLG-2P29
P502A,P503A	25055804	NPLG-4P760
	Sockets	
JL501B,JL502B	25050269	NSCT-5P97
JL931B	25050272	NSCT-8P100
JL932B	25050268	NSCT-4P96
P701A	25052223	NSCT-27P2120
P303A	2009990697UL	NSAS-6P0972
	Jacks	
P301,P302	25045575 or	NPJ-4PDRW389
	25045303	NPJ-4PDBL162
	Retainer	
E931	27141059	Retainer

Note

<PP>.....European model only
<DT>.....120V model only
<GT,GR>...220-230V model only

THE COMPONENTS IDENTIFIED BY MARK⚠ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

PARTS LIST
CIRCUIT SECTION 2

U2 **Acoustic PC board(NAAF-7337-1B/1C/1D/1E)**

REF. NO.	PART NO	DESCRIPTION
	ICs	
Q361,Q461	22241383R2 or	NJM4565M-D
	22240489R1NE	MPC4570G2-T1(MST)
Q381	22240981R2	TC9162AF
	Transistors	
Q362,Q462	2215510R2	RN1443
Q382	2216220R2 or	KRA102S
	2214530R2	RN2402
	Capacitors	
C361,C367	354742209	22uF,16V,Elect.
C369,C385	354780109	1uF,50V,Elect.
C382	354761019	100uF,35V,Elect.
C386,C387	354742219	220uF,16V,Elect.
C461,C467	354742209	22uF,16V,Elect.
C469	354780109	1uF,50V,Elect.
C365,C366	374725634	ECQ-V50V-563J,Plastic film
C368,C468	374721534	ECQ-B50V-153J,Plastic film
C370,C470	374721544	ECQ-V50V-154J,Plastic film
C465,C466	374725634	ECQ-V50V-563J,Plastic film
	Resistors	
R386,R387	443521004	10ohm +/-5%,1/2W,Metal oxide
R381	5104383	N16RGL100KBT20F,Variable
	Plug	
P303B	25055441	NPLG-3P423
	Shield plate	
R381A	27150477	(VOL)
	Socket	
P304B	25051237	NSCT-12P1027

U3 **Driver PC board(NAAF-7338-1B/1C/1D/1E)**

REF. NO.	PART NO	DESCRIPTION
	Transistors	
Q501,Q502	2216154R2 or	2SC1622A(D18)
	2216153R2	2SC1622A(D17)
Q503,Q603	2216175R2 or	KTC3875-GR
	2213143R2 or	2SC2712-O
	2213144R2 or	2SC2712-Y
	2213145R2 or	2SC2712-GR
	2216173R2 or	KTC3875-O
	2216174R2	KTC3875-Y
Q504-Q506	2215975 or	KTA1266-GR
	2211455	2SA1015-GR
Q507,Q607	2215985 or	KTC3198-GR
	2211255	2SC1815-GR
Q601,Q602	2216154R2 or	2SC1622A(D18)
	2216153R2	2SC1622A(D17)
Q604-Q606	2215975 or	KTA1266-GR
	2211455	2SA1015-GR
	Diodes	
D501,D503	223234R2 or	1SS352,Chip
	223269R2	1SS355,Chip
D601,D603	223234R2 or	1SS352,Chip
	223269R2	1SS355,Chip
D502,D602	224490560R2 or	UDZ5.6B
	224550560R2	UDZS5.6B
	Capacitors	
C501,C504	354742209	22uF,16V,Elect.
C505,C605	354742219	220uF,16V,Elect.
C509,C609	354741009	10uF,16V,Elect.
C5621,C562	354761019	100uF,35V,Elect.
C601,C604	354742209	22uF,16V,Elect.
	Resistors	
R512,R513	443523904	39ohm +/-5%,1/2W,Metal oxide
R514,R614	443523304	33ohm +/-5%,1/2W,Metal oxide
R515,R612	443523904	39ohm +/-5%,1/2W,Metal oxide
R561,R562	443522204	22ohm +/-5%,1/2W,Metal oxide
R613,R615	443523904	39ohm +/-5%,1/2W,Metal oxide
	Sockets	
P501B	25051237	NSCT-12P1027
P502B,P503B	25051526	NSCT-4P1313

Note
<PP>.....European model only <DT>.....120V model only <GT,GR>...220-230V model only
THE COMPONENTS IDENTIFIED BY MARK⚠ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

U4 **Headphone PC board(NAETC-7339-1B/1C/1D/1E)**

REF. NO.	PART NO	DESCRIPTION
	Resistor	
R528,R628	443523914	390ohm +/-5%,1/2W,Metal oxide
	Jack	
P504	25045396	LGT1516-0101
	Wire holder	
JL501A	25051109	NSCT-5P896

PARTS LIST CIRCUIT SECTION 3

U5 Connection PC board(NAETC-7340-1B/1C/1D/1E)

REF. NO.	PART NO	DESCRIPTION
	ICs	
Q951	222780125JRC or	NJM78M12FA
	222780125MIT or	M5F78M12L
	222780125NEC	MPC78M12HF
	Transistors	
Q101	2216175R2 or	KTC3875-GR<PP>
	2213143R2 or	2SC2712-O<PP>
	2213144R2 or	2SC2712-Y<PP>
	2213145R2 or	2SC2712-GR<PP>
	2216173R2 or	KTC3875-O<PP>
	2216174R2	KTC3875-Y<PP>
	Capacitors	
C952	354741009	10uF,16V,Elect.
C104	354780339	3.3uF,50V,Elect.
	Resistor	
R951	452530474	4.7ohm +/-5%,1/2W,Metal oxide
	Plug	
P104A	25055707	NPLG-11P663
	Sockets	
P102B,P103B	25051231	NSCT-6P1021
P101B	25051238	NSCT-13P1028
P105A	25052248	NSCT-15P2145

U6 Input/Output PC board(NAETC-7341-1B/1C/1D/1E)

REF. NO.	PART NO	DESCRIPTION
	Jacks	
P311	25045571 or	NPJ-6PDRW386
	25045300	NPJ-6PDBL159
P781	25045504	NPJ-1PDBL319
	Socket	
P104B	25051236	NSCT-11P1026

U7 Display PC board(NADIS-7342-1B/1C/1D/1E)

REF. NO.	PART NO	DESCRIPTION
	FL. Tube	
Q705	212223	HNA-09SS27T
	LES	
D707	225338	SLR-332VR
D708	225340	SLR-332DU
	Remote sensors	
U701	241335 or	SPS-444-1
	241341	SPS-444-1-E1
	Capacitor	
C726	353741009	10uF,16V,Elect.
	Push switch	
S702-S707	25035699	NPS-111-S662
	Rotary Encoder	
S701	25065622	EC11101200
	Wire holder	
JL703B	25051093	NSCT-9P880
JL701B,JL702B	25051094	NSCT-10P881

U8 Microprocessor PC board(NADG-7343-1B/1C/1D/1E)

REF. NO.	PART NO	DESCRIPTION
	ICs	
Q701	22241712R3	MPD78045FGF-133-3B9
Q702	22240239	TA7291S
Q704	22241297R2	BU1923F<PP>
	Transistors	
Q703	2216210R2 or	KRC104S
	2214490R2	RN1404
Q706	2216230R2 or	KRA103S
	2214540R2	RN2403
	Diodes	
D701,D702	22380260 or	RL1N4003
	22380032 or	1SR139-100
	22380035	GP104003E
D703,D704	223234R2 or	1SS352,Chip
	223269R2	1SS355,Chip
D705,D706	224490510R2 or	UDZ5.1B,Zener
	224550510R2	UDZS5.1B,Zener
	Oscillators	
X701	3010261	HC-49/U03 4.19M10P
X702	3010203	AF6146CG<PP>
	Coils	
L701	231237K220R2	NCH-1477
L702	231237K220R2	NCH-1477<PP>
	Capacitors	
C708	3000120	FMC0H104Z,EDL
C703	353744709	47uF,16V,Elect.
C705	353780109	1uF,50V,Elect.
C711	354780339	3.3uF,50V,Elect.
C715	353781009	10uF,50V,Elect.
C716	354721019	100uF,6.3V,Elect.
C721,C724	354721019	100uF,6.3V,Elect.<PP>
C722	374725614	ECQ-B50V-561J<PP>
C707	3060031	NTC-45P27
	Socket	
P701B	25052223	NSCT-27P2120
	Wire holders	
JL701A,JL702A	25051094	NSCT-10P881
JL703A	25051093	NSCT-9P880
JL704A	25051094	NSCT-10P881

Note

<PP>.....European model only
<DT>.....120V model only
<GT,GR>...220-230V model only

THE COMPONENTS IDENTIFIED BY MARK⚠ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

PARTS LIST
CIRCUIT PARTS 4

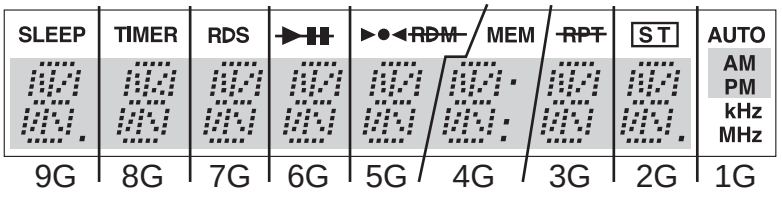
U9 **Power supply PC board(NAPS-7344-1B/1C/1D/1E)**

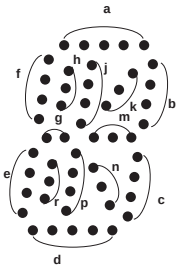
REF. NO.	PART NO	DESCRIPTION
	Transistors	
Q901	2215830 or	KRC105M
	2213640	DTC123JS
	Diodes	
D902-D905	22380260 or	RL1N4003
	22380032 or	1SR139-100
	22380035	GP104003E
D901,D906	223234R2 or	1SS352,Chip
	223269R2	1SS355,Chip
D907	223234R2 or	1SS352,Chip
	223269R2	1SS355,Chip
D908	224490510R2 or	UDZ5.1B,Zener
	224550510R2	UDZS5.1B,Zener
	Coils	
L571,L671	231176S	S-1.3C
	Capacitors	
C904	354742219	220uF,16V,Elect.
C905	354741009	10uF,16V,Elect.
C901	3500196	RE275V-103M,Plastic film
C571,C671	374721034	ECQ-B50V-103J,Plastic
C573	374724734	ECQ-V50V-473J,Plastic
	Resistors	
R901	443521004	82ohm +/-5%,1/2W,Metal oxide<PP>
R906	443528204	10ohm +/-5%,1/2W,Metal oxide
R571,R671	453530564	5.6ohm +/-5%,1/2W,Metal
R901	453530564	5.6ohm +/-5%,1/2W,Metal<DT,GR,GT>
R907	431533355	⚠ RC1/2GFKUL-3.3M,Solid<DT>
	Transformer	
T902	2301464	⚠ NPT-1398D<DT>
	2301465	⚠ NPT-1398G<GR,GT>
	2301539	⚠ NPT-1398P<PP>
	Relays	
RL901	25065603 or	⚠ NRL-1P5A-DC9-152
	25065601	⚠ NRL-1P5A-DC9-150
	Terminal	
P571	25060286	NTM-4PDML217
	Jack	
P572	25045567	NPJ-1PDBL382
	Plug	
P901A	25055676	NPLG-2P632
	Fuse holders	
F901A,F901B	25052133	⚠ NSCT-1P2031
	Wire holders	
JL502A	25051109	NSCT-5P896
JL931A	25051112	NSCT-8P899
JL932A	25051108	NSCT-4P895
	Labels	
F901C	29363040	T315mAL250V<PP>
	29363040	T315mAL250V<GR>
	29363040	T315mAL250V<GT>
	29360667	LABEL(F)<DT>

Note
<PP>.....European model only
<DT>.....120V model only
<GT,GR>...220-230V model only

THE COMPONENTS IDENTIFIED BY MARK⚠ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

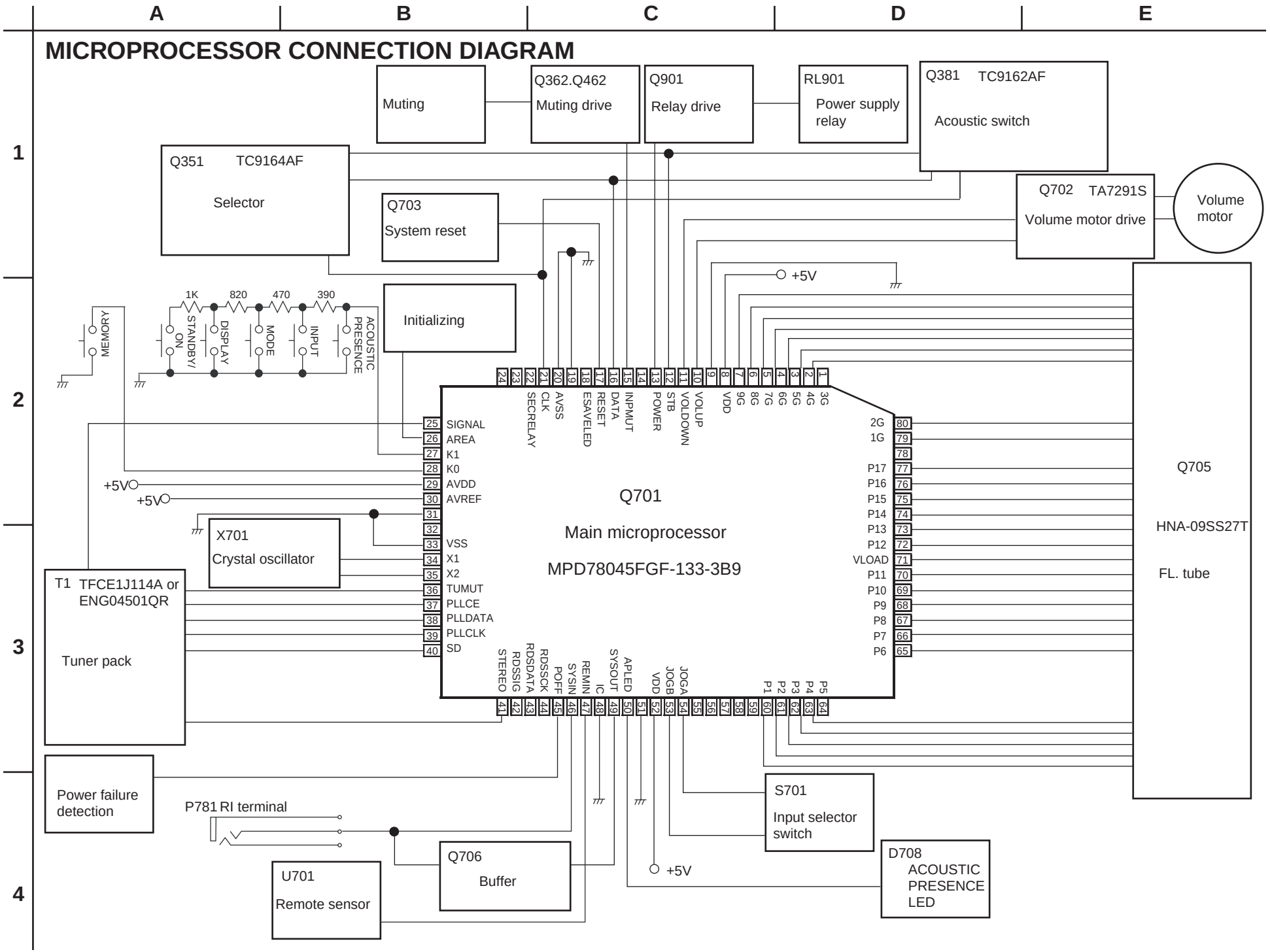
FL. TUBE



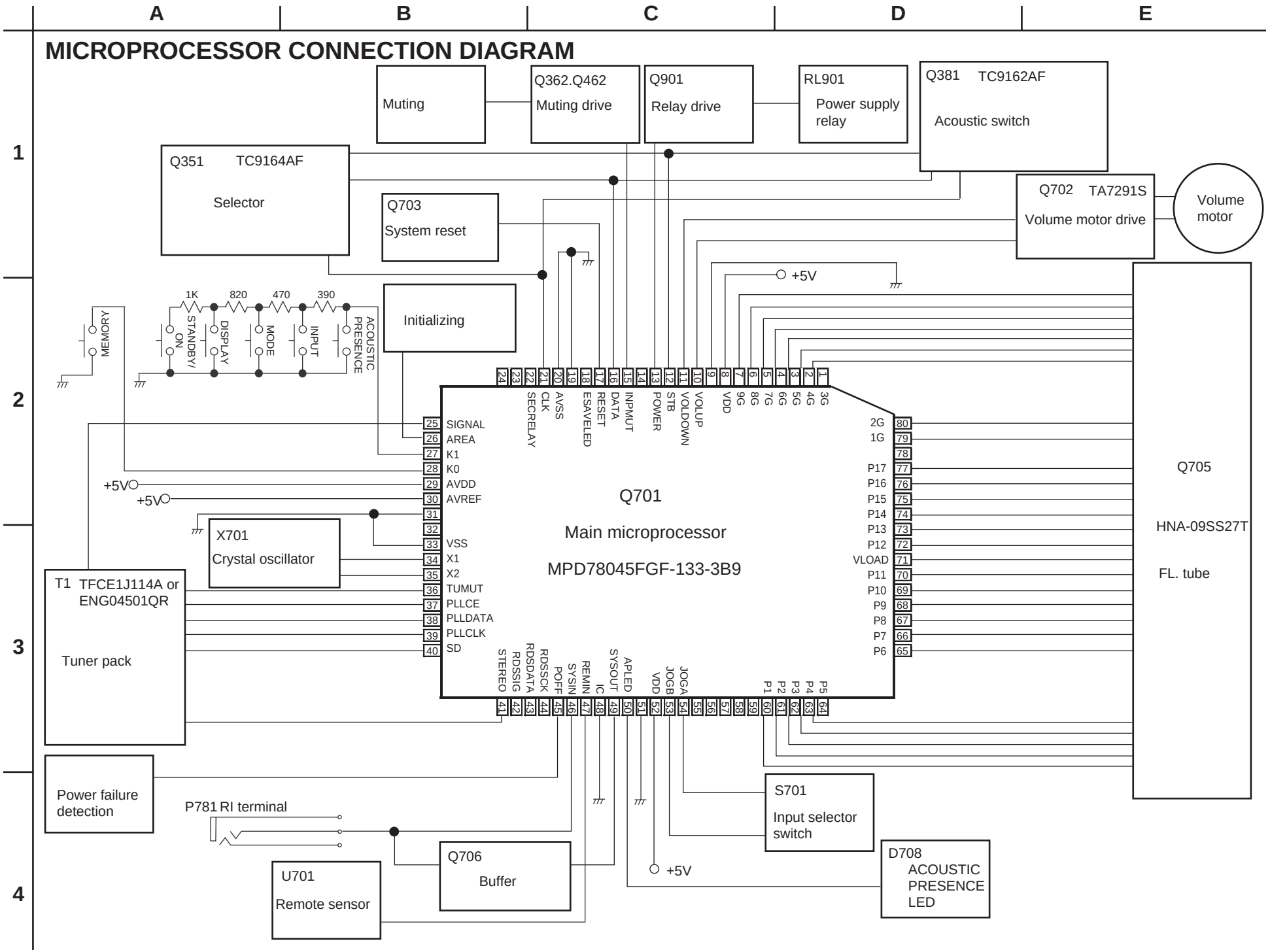


	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	a	a	a	a	a	a	a	a	-
P2	j	j	j	j	j	j	j	j	-
P3	h	h	h	h	h	h	h	h	-
P4	k	k	k	k	k	k	k	k	-
P5	b	b	b	b	b	b	b	b	-
P6	f	f	f	f	f	f	f	f	-
P7	g	g	g	g	g	g	g	g	-
P8	m	m	m	m	m	m	m	m	PM
P9	c	c	c	c	c	c	c	c	AM
P10	e	e	e	e	e	e	e	e	-
P11	n	n	n	n	n	n	n	n	-
P12	r	r	r	r	r	r	r	r	MHz
P13	p	p	p	p	p	p	p	p	kHz
P14	d	d	d	d	d	d	d	d	-
P15	SLEEP	TIMER	RDS	▶	RDM	MEM	RPT	ST	AUTO
P16	Dp	-	-	▮▮	▶●◀	Dp	-	Dp	-
P17	-	-	-	-	-	col	-	-	-

MICROPROCESSOR CONNECTION DIAGRAM



MICROPROCESSOR CONNECTION DIAGRAM



ADJUSTMENT PROCEDURES

Adjustment of clock frequency

1. Connect the frequency counter between the terminal P305 and Chassis.
2. Press and hold down the MEMORY button, then press the DISPLAY button.(All segments on FL tube light on)
3. Adjust the trimmer capacitor C707 so that the reading of frequency counter becomes 524.288 kHz.

Destination check

Press and hold down "MEMORY"key at standby,then press "INPUT"key .

Destination	Indication
MJJ	JJ
MPP	PP
MDT,MGT,MGR	DT,GT
NO GOOD	AREA NG

Version indication of microprocessor

Press and hold down "ACOUSTIC PRESENCE"key at standby,then press "INPUT"key.

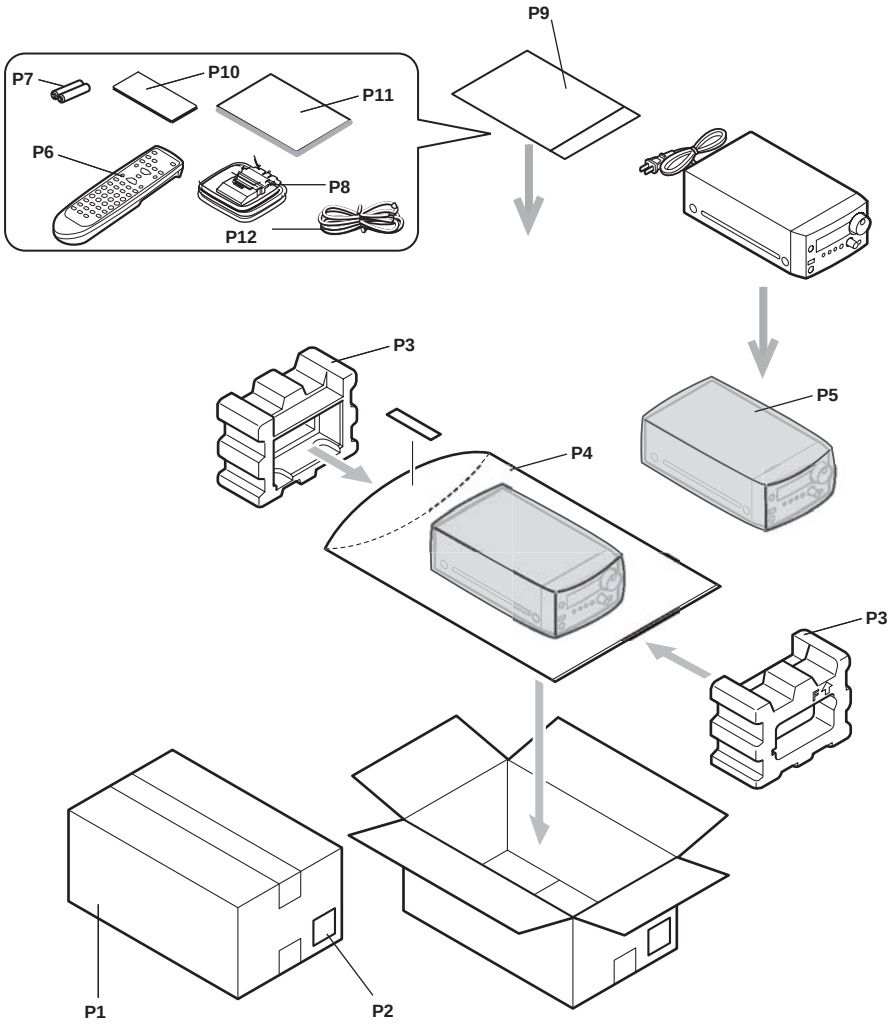
Initialize

1.Press and hold down "MEMORY"key at standby,then press "DISPLAY"key. (The all segments on the FL. tube light on)
2.Press "STANDBY/ON"key.

Shipping position

Turn the volume to a minimam position.

PACKING VIEW



PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
P1	29053813	Carton <PP>
	29053812	Carton <DT,GT>
	29053814A	Carton <GR>
P2	29362962A	EAN Label
P3	29092008	Pad ass'y
P4	29100123C	430x550,Polybag
P5	29095906	Sheet
P6	24140466A	RC-466S,Remote controller
P7	3010154	UM-3,Battery
P8	232140	NMA-3057,AM 100p antenna
P9	29100097-1A	350x250,Polybag
P11	29343214A	Instruction manual,E
	29343215A	Instruction manual,U3GDSW<PP>
	29343216A	Instruction manual,U3FSI<PP>
	29343218A	Instruction manual,CT<DT,GR,GT>
	29343233A	Instruction manual,CS<GR>
P12	292115	FM Antenna ass'y
P13	25065462	YAE21-0237,FM antenna adapter

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